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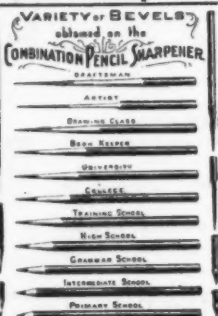
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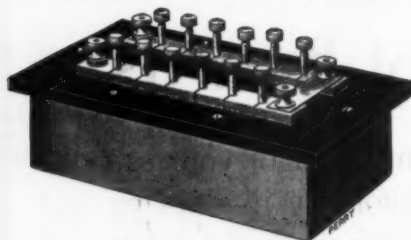


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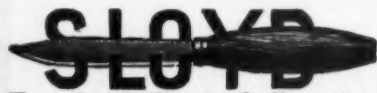
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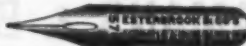
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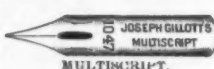
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By Mary Proctor, New York.

The conviction is spreading that America needs a national university, wherein specialists should be maintained to train other men in their own line of work. The offices of such a university would be, to supplement the work done in other colleges and universities by supplying full courses of post-graduate instruction, in every department of learning. Ever since the time of Washington, our law-givers have had in contemplation, the erection of such a building at the nation's capital, now Washington. Such a university would undoubtedly exert a great influence upon the national government itself in every branch and department, and would powerfully strengthen the patriotic sentiment of the country.

The proposition of to-day is this: to urge upon Congress the early establishment of such a university, of the highest type and to be known as the University of the United States. Its form of constitution shall secure it against partisan control—a thing not difficult, as shown by the success of leading state universities and of scientific institutions controlled by the general government. The internal management shall be with its educational members. The conditions of admittance shall be character and competency. Only those who have already obtained the bachelor's degree can here obtain other degrees. The fellowships shall be duly endowed and open to the best qualified, and the professoriate shall be so constituted as to secure it the highest possible character and efficiency. The departments of letters, science, and philosophy shall be centers for the grouping of post-graduate professional schools of every class.

The foundation of such a university shall be with such means as befit the great undertaking and shall encourage liberal endowments from other than governmental sources; thus easily making it the leading university of the world. A beginning now on the part of the national government would be certain to attract large donations from private sources for the endowment of fellowships, professorships, faculties, and departments.

There is every reason for renewing the effort to found a national university, and the conditions of success are, a thorough awakening of once active friends of the proposition; readiness of all to co-operate, without regard to minor differences; systematic or-

ganization, with a view to the most effective service; and full unity of plan and purpose, with concentration of forces under a common leadership. The need for such a university increases each year, as shown by the fact that some 3,000 American graduates are now seeking opportunities abroad; for the place at the head of our system is now held by the university of a foreign land. Compared with the leading nations of Europe, America is at a great disadvantage, as far as the progress in higher education is concerned.

Germany has become the world's leader in the whole field of higher culture, lavishing her resources upon her universities, strengthening them on every side, especially the scientific, and providing new accommodations for them at a cost of millions for a single department. Austria has, in one or two cases, not only exceeded Germany, but has placed her central institution before all others in the world, in so far as material provision and ambitious plans are concerned, erected buildings for its use at a cost exceeding the present available endowment of any university in America, and planned researches in the interest of science which are intended to place her in the van of the world's army of progress. So of the Dutch, Scandinavian, and English governments, all have received a new awakening and are moving with a degree of zeal and liberality hitherto unheard of. Nor are the Latin nations content to rest on laurels already won. France, having advanced the educational budget beyond all precedent, is now developing her *Ecole Pratique des Hautes Etudes* with a view to highest possible standards, and is dealing most liberally with the Sorbonne, the College de France, and other great professional institutions of France. The *Ecole Libre des Sciences Politiques* has become the foremost institution of its kind in the world. Italy is building palatial structures for her universities at the great centers, fully resolved not to be left in the rear of this grand new movement. Everywhere concentration of means and forces, to the end of leadership and eventual supremacy in the university field, is the watchword.

"It is for America to say whether she will be content to lag forever in the rear of nations so greatly her inferior in resources, or whether she will at last take the one remaining step requisite to fairly meet the demands of learning and of those free institutions for which she assumes to be the supreme representative." (Extract from report, made by Mr. Hunton, before Congress, May 24, 1894, in behalf of the University of the United States.)

The idea of a national university originated with Gen. George Washington, and it was a subject he always had much at heart, never failing to press its importance on the country on all suitable occasions. It is said, that during the autumn of 1775 Major

William Blodget went into the quarters of General Washington to complain of the "ruinous state of the colleges from the conduct of the militia quartered therein." A young relative of this major, Samuel Blodget said, "Well, to make amends for those injuries, I hope after our war we shall erect a noble national university at which the youth of all the world may be proud to receive instruction." General Washington replied: "Young man, you are a prophet, inspired to speak what I am confident will one day be true." Thus, before the declaration of independence, before the contest for freedom was fairly begun, the seed of thought was sown which twenty years later ripened into a deliberate plan. As a last act for the public welfare, Washington showed how deeply in earnest he was, with regard to the foundation of the proposed university, by putting in his will, made July 9, 1799, a provision which carried out his promise made some time before. For the National university, he gave five hundred shares, worth \$500 each, in the Potomac Canal Company. Then he repeats his desire that the youth of the country may receive education at home instead of abroad: in arts, sciences, politics, and good government.

Meanwhile, nothing has been actually accomplished, despite the support of such leaders as Jefferson, Madison, John Quincy Adams, and others. The bequest has become worthless, for the Potomac Canal Company failed. And now, one hundred years have passed away, "with his most earnest wish disregarded, his most emphatic recommendations neglected, and the funds bequeathed to help carry out his wishes squandered." (Extract from speech of Hon. Eppa Hunton, of Virginia. Delivered in the Senate of the United States, December 13, 1894.)

Surely, the founding of a national university would be a fitting climax to this epoch-making century, and shall we not, on December 14, 1899, one hundred years after the death of Washington, on the site in the city of Washington which he selected, lay the foundation of that university which he desired. It would be a lasting memorial of Washington, the wisest and best of men, the patriot, hero, and leader of the revolution, the leader in the formation of our government, and the first president of the United States.

Those Who Must Be Obeyed.

Superior Officers of Chicago Teachers. II.

By Eleanor Jerrold.

The first article of this series appeared in *The School Journal* of June 5, 1897.

Mr. Speer came in with the force of dynamite and turned upside down the whole established order of teaching reading, spelling and arithmetic. At his institute, he attempted to explain his methods, but the poor man became confused, and sometimes was unable to find answers to his own problems. Behind this nervousness was the thorough belief in his own theories, and that always carries conviction. We feel sorry for his embarrassment, because we liked him, the admired, the dapper, gallant little gentleman whose buttonhole bloomed perpetually, and we hoped, in time, to think as he did. He says over and over, and means it, too, that he wishes no teacher to adopt his methods who does not fully believe in them. We all know better than to go

against the head, so we speedily bring ourselves to believe and teach anything, be it said.

The parents of children beginning school are rather discouraged when their young heirs, at the end of five or six months, are unable to read anything. Their ability to tell the ratio between $\frac{1}{2}$ and $\frac{3}{4}$, etc., counts as nothing; poor little six-year-old Johnnie although it may be the cock-of-the-walk-at-school, is made to feel very small indeed when comparison, which we all know is odious, is made between him and his brother James at the same age.

His talk of polygons and hexagons makes no impression on his mother, since she doesn't know what they are herself, and "can't see any reason why any one should know it, let alone a child of six years." It is a well-known fact among school people, that if a child is smart, he gets the credit, and if he is slow, the teacher is blamed. If Johnnie's mother is a fond mother, the teacher hears, in language more emphatic than polite, what is thought of such teaching, and is threatened with the "Board," unless Johnnie learns something sensible. The teacher's explanations are met with scoffs and tossings of the head very hard to stand, but we must be polite to parents, though the heavens fall.

In the higher grades, where visualization is the fashion, the teacher has to meet the reproachful parent who cannot comprehend why her boy hasn't any spelling to learn. When she went to school, she had to study every night, and she wants her boy to be a good speller. We politely explain, he is learning spelling in a much better way, and see such incredulity in her face that we feel our labor has been wasted. We are not surprised to hear afterward that we are very nice, but "queer," and she doesn't think much of our teaching. O, we have to stand a great deal, while the real sinner is sitting calmly aloft up in the Schiller, "far from the madding crowd." These are some of the troubles Mr. Speer has brought upon us. The majority of teachers, not only in Chicago, but all over the country, recognize a great deal of good in his methods; whether it is a lasting good or not only time can tell. We have had so many "good things" which have died away that it would not be much of a surprise to hear in the course of a few years that Mr. Speer's arithmetic is "all wrong"—just as Mr. Bright's language book, which no teacher should be without some years ago, is now ridiculed; but variety is the spice of life, so here's to the new prophet and his methods, whoever he may be. Mr. Speer spends his visiting time in the lower grades, beginning at the foundation, so to speak. In the upper grades, his visits are like those of angels—few and far between. When he comes in, however, he treats the teacher with the courtesy a gentleman would extend to a lady in her own parlor, or in his. Imagine the surprise of one down-trodden schoolma'am when, standing at the side of the room, while her pupils were being put through their paces by the principal, who was seated. Mr. Speer brought her a chair (there were but two in the room). Words fail to describe her sensations. Such a thing was never heard of before, by her at least. Well, well! after the parents have been educated, we expect smoother sailing, if, in the meantime, something new doesn't turn up.

Mr. Delano, who, as head of the Chicago normal school, has taught so many of the older teachers, brings

no terror with him. As one of the children said, "I am not afraid of that little man, he is so kind." I suppose at sight of him, his former pupils unconsciously begin to have more "vim," remembering how, in their school days, he had impressed that upon them at every lesson; then, too, we cannot help feeling that since he taught us how to teach, he should be responsible for our errors. Knowing what a high estimate he places upon neatness, and particularly upon neat desks, the announcement of his presence is a signal for a general "clarin' up," and he always finds the forewarned spick and span. He is kindness and consideration personified, and each one in his district feels that he makes due allowances for her mistakes. Long years of normal work probably taught him that teachers, like poets, are born, not made. When five thousand teachers are required for the shooting of young ideas, a large proportion of them must, necessarily, be "self made" by years of patient endeavor, and certainly should receive more credit than those by "heaven ordained." Miss Sabin, as well as Mr. Lane, had been principal of the old Franklin school. Miss Hartney was his assistant principal. It has been said that position was created for her; at any rate, she was the first one who held it. They were placed on the superintendent's staff at the same time. Long and warm were the discussions among the teachers, as to whether Mr. Sabin's "pull" helped Miss Hartney or vice versa. I think the matter was never satisfactorily settled.

Both proved very good friends to the teachers of the Franklin, whose merits no one knew better than they. So many promotions to better paying positions were made from that school that it became a matter of ridicule; and "Is she a Franklinite?" was the first question asked when an assistant principal, or principal, or head assistant was assigned.

All teachers were recommended to go to the Franklin for sources of inspiration for their work, and teachers are so anxious to please the "powers that be," that the school was flooded. The reading was especially noted, and in a short time any one passing through the school halls would hear tones loud enough to fill the auditorium (almost) issuing from the rooms. Loud reading was the fashion; the teacher whose children could be heard the greatest distance was a proud and happy mortal. This condition of affairs may have been caused to a certain extent, by Mr. Sabin's deafness. Mr. Sabin has not "passed away," but loud reading has. "Silent reading," the responsibility which rests upon Mr. Speer, has taken its place. Mr. Sabin is a very fair singer, and a thorough appreciator of good music. The "forewarned" in his district tune up if they think his visit will be in singing time, and struggle to overcome the difficulties which have beset their paths. Whatever recitation is in progress he takes in hand and simplifies or gives a suggestion, by his method, to the teacher, so she is always benefited by a visit from him. Always kind and thoughtful, he is greatly respected, even if the teacher does make low remarks to the children, urging them to "speak up, or the gentleman won't hear." A word as to the "forewarnings." I have spoken of. Various schools have various methods, but I think there are very few in which some system of signaling is not in vogue. The watchword of one for the assistant was, "Tommy is sick." If the

superintendent, "Tommy is very sick," and strict were the injunctions the messenger received to make the "very" emphatic. In another, it was, "Miss ——— wants Wells' grammar." The signals were artfully constructed, so that if, by any chance, the visitor happened to be present his suspicions might not be aroused. The warnings usually made the warned so nervous she would jump at every turn of the knob; neither she nor the children appeared to as good advantage as if taken unaware. Teachers, generally, are extremely conscientious, and never have any time to "soldier;" but if once in a life time she yields to temptation and does outside work, she is sure to be caught. One young teacher, especially faithful to business, made a mistake in her report. She was so bothered about it that, feeling she could not teach to any advantage, she assigned some written work and sat down resolutely to find her mistake.

The superintendent came in and "caught her." She was so confused and embarrassed, she did not attempt to explain the situation. At noon, with tears in her eyes, and almost sick from worry, she told her little story to the principal—a woman. She received sympathy, and was told she (the principal), when teaching, had often had temptations to which she yielded. She made light of it, and sent the girl away, comforted. What she did not tell her was that it took all the powers of persuasion to convince the superintendent that the delinquent was one of her most faithful workers.

The girl had such a painful lesson that she never yielded again, and often refrained from doing perfectly legitimate work for fear it might have the appearance of outside work; but all principals are not as sympathetic as the one referred to, nor all teachers as conscientious.

A Plea for the "Good Boy."

By Mary E. FitzGerald.

From the amount of time devoted by educators to the "ways of the bad boy," "management of the bad boy," and "influence of the bad boy," it would appear that he was to be the element upon which the future welfare of the country depended. By "bad boy," of course, we all understand, not the vicious, but the troublesome. In many years of teaching, I have never encountered a vicious child; and the "bad boy" in a book and out of school is quite likely to be an interesting, lovable, amusing little fellow. I say "little," because after thirteen years of age they usually cease to be an annoyance to their teachers.

With due modesty, I may claim to be what is called a "good disciplinarian," and have been complimented many times upon my "tact," in dealing with troublesome elements; but I have always inwardly rebelled against the time wasted in managing a boy who, in nine cases out of ten, was not worth the trouble; recognizing the fact, however, that under existing circumstances, "he" had to be kept in school if the whole fifty children never learned a thing; we, with the wisdom of serpents, maneuvered and modified our requirements to suit him. A bad boy is very seldom brighter than the twenty-five or thirty good ones, but we are so bent on propitiating him that every credita-

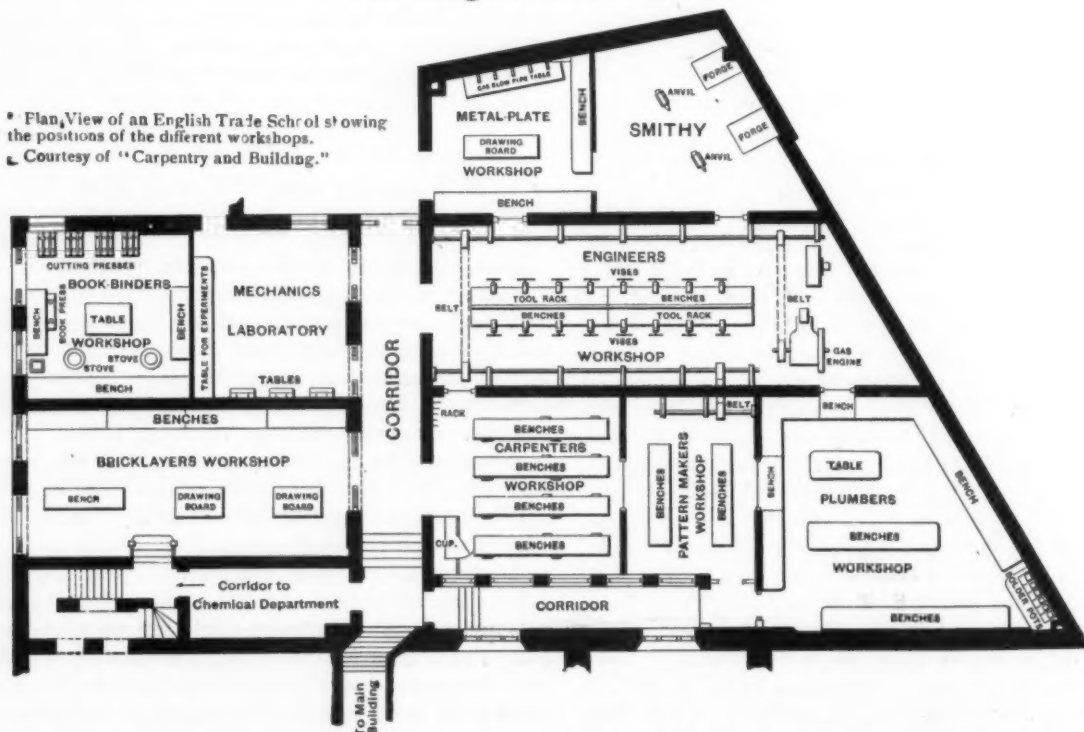
ble performance is greeted with approving words, and stands out vividly. He is active, or he wouldn't be troublesome, and if he is interested in any special subject he goes at it with a vim until he is tired out, which is usually very soon. The most ingenious teacher in the world cannot always find ways and means of directing this activity into channels agreeable to him, and even in the ideal school, every child cannot be equally interested in every study. At the present time I have a "bad boy" who has a positive genius for housework. He would be quite content to spend the whole day brushing up the floor of my closet, straightening out the book shelves, and keeping everything ship shape. We have never entered into any positive agreement, but it is an understood thing that if his problems (which he detests) are finished, he may roam at will, and housekeep to his heart's content. Out of consideration for the "good boy," who might have an equal liking for housework, I have called the attention of the children to the fact that, "John keeps everything so very nice that we had better let him take care of things." I hope they don't suspect it is to keep him from annoying the community, but I believe, with Emerson, that a child knows what's in your heart. But why should the bad boy get all the plums? Children dearly love to do little services for their teacher, but the good ones are very seldom allowed to do them. This whole condition of affairs is certainly a bad preparation for the "bad boy's" after life, when no allow-

ance will be made for him, on the ground that, "It is so hard for him to be good."

He will not get the most desirable positions in life, because if he doesn't get what he wants, he may conduct himself so badly that he may have to go to the penitentiary. No, he will find no privileges accorded him, unless it is a free lodging and food, at the expense of the "good boys," unless he deserves them. The board has endeavored to overcome the anxiety and worry occasioned teachers by this troublesome element, by providing a special room in some schools for them; but in that room they are accorded privileges which the other children have not. It seems to me a special room, where they were held accountable for the slightest infringement of the school law—just as they will be held accountable out in the world—might be a very beneficial measure, and fit them for the buffets they may expect when unruly and arrived at manhood. Some day, I suppose, some one with a divine inspiration may arise, and know just what to do; but in the meantime a teacher is gray haired and marked with wrinkles long before her time, owing to her "bad boys," while the "good boy," after spending a year in her room, goes away, and the ungrateful teacher in a few weeks forgets even his name. It has always been a mystery to me why all boys aren't troublesome, when they see the deference with which the unruly ones are treated. I try to keep that thought out of my mind, however, in the presence of children, for fear it might affect them and create a revolution.

An English Trade School.

* Plan View of an English Trade School showing the positions of the different workshops.
 * Courtesy of "Carpentry and Building."



In 1891 an act of parliament was passed to encourage technical education in Great Britain. The first school established under the act was the Borough Polytechnic Institute, of London, which was opened September, 1892. The class-rooms, halls, laboratories, and offices were well equipped for furnishing a general technical education and recreative advantages for the working men and women of South London. The course of instruction includes carpentry, plumbing, sheet metal working, engineering, blacksmithing, pattern making, bricklaying, bookbinding, etc. Only those engaged in trades may receive instruction, and it is intended to supplement, instead of superseding, the training received in the factory or work shop. Each student who takes a course in trade training is expected

to join at least one of the science or art classes. In this way the mechanic will receive an all-around training.

At first the trade classes were carried on in the institute building, but they soon outgrew their quarters, and new work shops were provided in a separate building. These shops were opened for use in March, 1894. The plan view shows the arrangement of the different shops. With the exception of the bricklayers, and bookbinders, all the shops are top lighted with lantern lights, with the side sashes, hinged to open for ventilation.

The cost of the shops was about \$15,360; that of the equipment, \$6,000.

The Heavens for October.

The Sun rises on October 1st at 5 h., 42 m., and sets at 5 h., 25 m., the length of the day being 11 h., 43 m. The sun rises on October 31st at 6 h., 18 m., and sets at 4 h., 38 m., the length of the day being 10 h., 20 m.

Mercury is in perihelion on October 5th, and in conjunction with Jupiter on October 6th. It is at its greatest elongation west, on October 7th, and at its greatest heliacal latitude north, on October 15th. On October 25th, it is in conjunction with the moon.

Venus is in conjunction with Jupiter on October 19th, and in conjunction with the moon on October 23d. It rises on October 5th, at 3 h., 1 m., A. M.

Mars is in conjunction with the moon on October 26th, and is in the descending node on October 30th. It sets on October 11th at 5 h., 38 m., P. M.

Jupiter is in conjunction with Mercury on October 6th, in conjunction with Venus on October 19th, and in conjunction with the moon on October 23d. Jupiter rises on October 19th at 3 h., 37 m., A. M.

Saturn is in conjunction with the moon on October 27th. Saturn sets on October 25th at 6 h., 12 m., P. M.

Uranus is in conjunction with the moon on October 27th.

Neptune is in conjunction with the moon on October 13th.

The Moon enters her first quarter at 0 h., 31 m., A. M., on October 3d; is full at 11 h., 42 m., A. M., on October 10th; enters her last quarter at 4 h., 9 m., P. M., on October 18th; and is new at 6 h., 28 m., P. M., on October 25th.

—Mary Proctor in "Popular Science News."

State Text-Books.

At the recent meeting of the Pennsylvania State Association of School Directors, Mr. Wm. McGeorge, Jr., of Cynwydd, Montgomery county, discussed the question, "Should the State Control and Publish School Text-Books?" He said, in part:

What does this question pre-suppose and involve? It may mean either that the state edits, manufactures and supplies text-books; or that the state simply selects them. Whichever horn of the dilemma its advocates may take, they are thereby making one of the most deadly assaults possible upon the integrity and efficiency of our school system.

It is amazing that this book question can be seriously proposed so near the beginning of the twentieth century, even if there were no experience to draw upon. But what can it mean to-day, in the face of the unanimous testimony of the school men of Vermont, and Maryland, and California, and Oregon, and Minnesota, and Indiana—everywhere that it has been tried—to the effect that the working of such laws in any form produces evil, and only evil results.

How has "uniformity" worked where it has been tried? If human testimony is worth anything, the educators who have watched the working of these books should know them. Hear what they say. One superintendent in Minnesota says: "Our text-book system has retarded the true progress of the schools." Another, "If every trial exhausts some tempting form of error, then truly the experience of this state should deter others from experimenting in the school-book business." Still another: "I do not think state uniformity is desirable; the books are not uniform here, as the state books have been laid aside for something better." And so on, indefinitely.

Hon. B. G. Northrop, ex-secretary of Connecticut state board of education, says: "The lessons of experience are decisive upon this point. The states which have tried this sovereign remedy of enforced uniformity have found it worse than the disease. Wherever such a law has been fairly tried it has soon been repealed."

Ex-State Supt. Henry Raab, of Illinois, says: "It has been frequently tried in other states, and uniformly failed, whether the books have been manufactured, purchased, or selected by state authority."

Indiana and California tell the same story. Uniformity is not desirable, even were it possible. Every community

should have the right to choose such text-books as are adapted to its needs. And the power to change text-books should also be carefully preserved and surrounded by every possible safeguard. Even the inert soil want a change of manure and products.

Does the idea of economy or cheapness attract you? When were excellent school books ever so cheap as they are to-day? But on this question let us see what those who have tried it say of the plan:

In California, the state printer estimated that he could produce 500,000 text-books for \$89,000. Before he had published 187,000 volumes, he had expended \$357,000, and, like Oliver Twist, was asking for more.

In Indiana, a few years ago, a law was passed, providing for the state publication of text-books. After the lapse of some time, a partial list was made, which extended only to the lower grades of pupils. The high school books, as before, were furnished by publishers. This list of books, which were to be published according to law, was first published by a syndicate, or school book company, as it was called, and after operating a year or two, the company sold out to the American Book Company, and the greater portion of the school book trade of the state of Indiana is now under the control of the last named company.

In Minnesota, the verdict of superintendents and other experts reads thus: "The books are inferior in manner of presenting subjects and in general make-up." "Nobody except the contractor and a few in his interest likes the books—and why should they?" "They are more expensive, because they do not satisfy the requirements." "It discourages competition; it favors monopoly; the law was conceived in corruption, and passed in the interest of the jobber, who needed a contract, and got it." "The state books are shams, in matter and make." "There is no real saving to the people." "As to the cheapness of books, there has never been a time, since long before this law was contemplated, that superior books to those furnished by the contractor could not have been purchased at as good figures."

To sum up the whole question, this scheme of state uniformity in text-books has been a failure wherever tried. It has not, could not, and would not reduce the cost. School books now are the cheapest books published. It would be absolutely impossible for the state to make books as well as those furnished by the publishers, and each community should be considered able and competent to choose its own text-books. Remember, text-books grow; they are not and cannot be made to order, and therefore it is ridiculous to suppose the wisest committee could at once originate improved books. This idea of uniformity bars all progress. Text-books produced under such a system are so poor that they prevent mental development. They stimulate teachers to violate law and get around the prescribed text-books, and even the most advisable and necessary changes cannot be made without the consent of the contractor.

In conclusion, have you considered what would be the effect of adopting any set of books however good, on the children? Have you stopped to consider the cost to them, and the injury done to a whole generation in its education? If a set of books are adopted for a given number of years, would there, or could there be any improvement? If books *must* be bought of him, would the contractor spend money to improve them? Remember, that once this monster gets a hold on you—once let these books in—and they will be like the Old Man of the Sea; you will be unable to shake them off. For the sake of the schools, for the sake of the children, let us unanimously protest against any and all such legislation.

Ventilation of School-houses.

In 1896, the general assembly of the state of Vermont passed the following act relating to the ventilation of school-houses:

Sec. 1. The state board of health shall, within a reasonable time, and as often as it thinks it is necessary, issue a circular letter to the local boards of health, giving the best information as to lighting, heating, and ventilation of school-houses.

Sec. 2. Local boards of health shall make, under the direction of the state board, a sanitary survey of each school-house, and report the same to the state board. The said local boards shall report at each March meeting to the voters of their towns the sanitary condition of the school-houses.

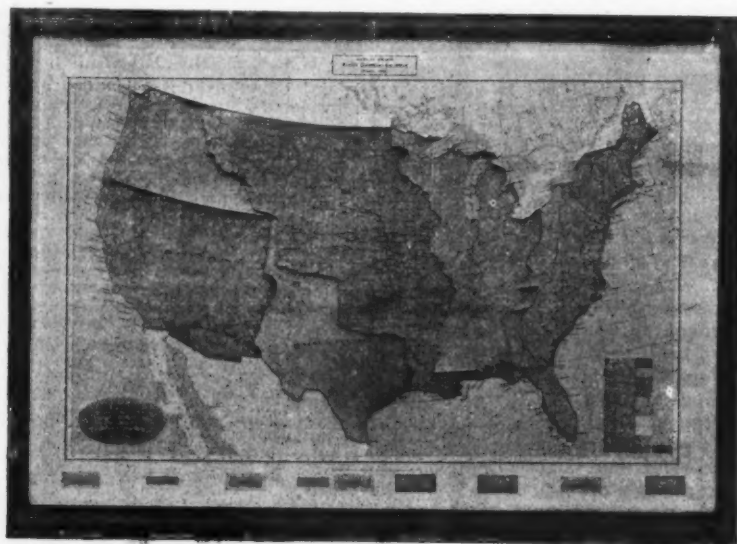
Sec. 3. All school-houses hereafter built shall be constructed in respect to lighting, heating, ventilation, and other sanitary arrangements according to regulations furnished by the state board of health.

School Equipment.

Under this head are given practical suggestions concerning aids to teaching and arrangement in school libraries, and descriptions of new material for schools and colleges. It is to be understood that all notes of school supplies are inserted for purposes of information only, and no paid advertisements are admitted. School boards, superintendents, and teachers will find many valuable notes from the educational supply market, which will help them to keep up with the advances made in this important field. Correspondence is invited. Address letters to *Editor of THE SCHOOL JOURNAL*, 61 East 9th Street, New York City.

Growth of the United States Shown by a Mechanical Map.

The accompanying cut shows in reduced fac-simile the Ives Historical Map, an interesting mechanical contrivance for illustrating the growth of the United States. The map itself, 34 by 24 inches, is mounted under glass and enclosed in an oak frame. Printed in neutral gray is shown, first, a simple river map of the United States. On this, grouped in distinctive colors, and arranged linguistically according to the map accompanying the eleventh census, are shown the locations of the various Indian tribes originally occupying the United States. Next are shown by colored dots—a different color for each nationality—the location of the early English, French, and Spanish settlements. Against each of these dots is a number referring to a corresponding number in an accompanying key, giving the name and date of the settlement. On touching the first of a row of keys below the lower edge of the frame, a colored segment slides into view, representing the 16 states corresponding to the 13 original colonies. This also shows how far the present boundaries of these 16 states extend beyond the drainage area which France, and subsequently Great Britain, insisted properly limited the colonies. The next key shows the segment of territory between the original 13 states and the Mississippi river, while a third shows the original Louisiana purchase. So each accession of territory down to the Gadsden purchase in 1853 is shown on the map by pressing a different key. Eleven red dots indicate the western movement of the center of population. The map will help any one to make interesting the teaching of United States history.



The Ives Historical Map.

Round the World by Rail.

It now takes sixty-six days to make the shortest route "around the world." The proposed British-American route, which is expected to be in operation by 1905, will require only half that time, and the estimated cost of the trip is less than \$500. Thirty years ago a Western man wrote an imaginary description of "The International Railroad." Strangely enough, the proposed route is almost in the exact track of the Western man's imaginary line, running from New York to Bremen, to St. Petersburg, to Vladivostok, to San Francisco, thence back to New York. The Chicago, Milwaukee, and St. Paul railway, headquarters at Chicago, publishes an

interesting map of the proposed route, which, though printed on a flat plate, has an effect similar to a globe, showing the proposed road clear around the world.

Voltmeter and Ammeter Combined.

The article has been constructed in response to a demand for a practical instrument, which should accurately and quickly read the voltage and amperes of batteries, small dynamos, etc., such as are in use in high school and college laboratories. The reading is for direct currents, and the range is from 0 to 50 volts, and from 0 to 20 amperes. Science teachers will



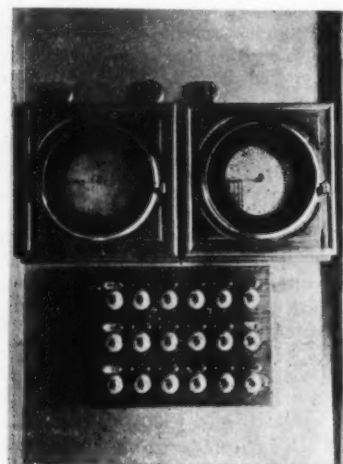
New Volt Reading Ammeter.

recognize the practical value of this article. The manufacturers are the Alfred L. Robbins Company, 149 and 151 East Huron street, Chicago, who fully guarantee the accuracy and quality of the instrument.

For Uniform Time.

Nothing is more necessary than accurate and uniform time in business buildings, school-houses, etc. In schools, particularly, the economic use of time is a necessity. The school program, which provides for many classes, and for the changing of pupils from class to class, must be made with great care, and carried out with precision.

The electric system furnished by the Standard Electric Time Company meets all requirements by providing uniform time in all departments, school-rooms, class-rooms, etc. The system consists of a regulator, or master clock, which is connected with any number of other clocks, located elsewhere.



Program Clock and Signal Buttons.

This regulator, which makes a fine time-piece for a principal's or a superintendent's office, is self winding, and requires attention not oftener than once a year. It also governs and runs



Secondary Clock.—Standard Electrical Co.

uniformly the clocks connected with it, so that they require no attention whatever.

The system is arranged to announce the school program; that is, to ring bells in any or all rooms at stated hours.

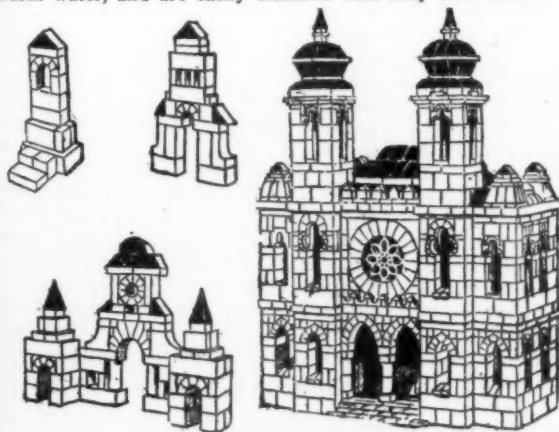
The regulator may be used also to run an electric tower clock, which may be conveniently placed in any location. No provision need be made for heavy weights and pendulums, nor does the clock require winding. It costs no more than other good clocks, while the price always includes the self-winding regulator. Besides the regulator, the tower clock includes the time movement, and the strike movement. The former is a strong, durable piece of mechanism, about one foot square and one foot high. It includes an electric motor, and has proper connection through connecting rods, universal joints, etc., with center gear, dial works, and hands. The strike movement occupies about the same space, and it also has a motor. It is arranged properly to strike bells of any size. Either of these movements may be used without the other. When used together, they are placed on the same iron frame, or standard, which is about three feet high.

Among the school buildings lately furnished with this system is the new high school, at Northampton, Mass. This building is provided with a regulator, or master clock, which controls twenty secondary clocks; besides this, the ringing of a number of gongs and bells depends upon its accuracy.

For information, address the Standard Electric Company, Waterbury, Conn.

Educative Building Blocks.

Richter's Anchor Blocks are an ingenious substitute for the box of wooden blocks that have heretofore held sway in the nursery. The Anchor Blocks are supplemented from time to time with new boxes accompanied by fresh designs, to be made with the new or the new and old blocks together. Each block is a piece of stone, resembling slate or brick, and sufficiently rough, to prevent slipping. If a lasting design is desired, the stones are capable of being fastened together with ordinary gum. They may be soaked apart again in lukewarm water, and are easily cleansed with soap and water.



A Study in Architecture.

The blocks are not alone valuable as playthings. Their handling develops in the child a sense of proportion, taste in combining colors, order, symmetry, deftness, and accuracy. The blocks are manufactured in Germany, near the home of Froebel, and have been adopted in this country in many kindergartens and primary schools.

F. A. Richter & Co., 215 Pearl street, New York, are the agents.

An Object Lesson Slate.

A new article, brought out by the Holly Manufacturing Company, silicate book slate manufacturers, 203 Front street, New York, is an object-lesson slate. This is a silicate slate, intended for slate or lead-pencil, having a numeral frame attached to the upper portion, and forming a part of the frame. The device is intended to explain the composition of numbers, and their fundamental processes. When the balls are counted, and moved, one at a time, every ball stands opposite its name, or the figure which stands for it. When the balls are added, subtracted, or multiplied, the process is followed by the

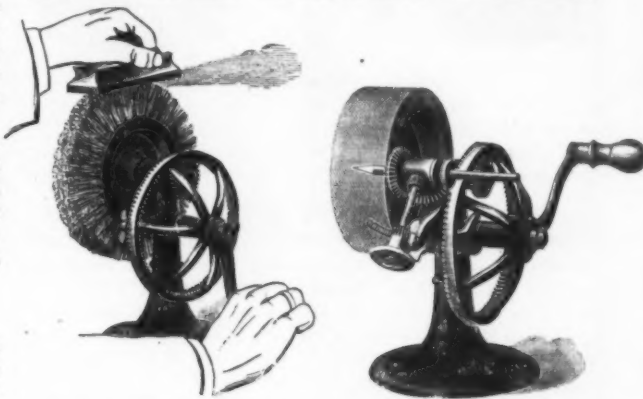
answer. The same device may be had in blackboards, 18x24 inches in size.

This company is about to put out an improved line of mosaic slates and tablets, lapilinum, or slated cloth, and a new kindergarten slate.

The members of the firm are H. W. Holly, the inventor of silicate slates, Clarence L. Coles, and Willis Holly, formerly secretary to Mayor Gilroy.

The "Combination Eraser and Pencil-Sharpener."

A machine which combines a blackboard eraser-cleaner and a pencil-sharpener is a necessity in every school-room. Such a device is offered by the Lord Manufacturing Company, 125 Water St., New Haven, Conn. Although a combination of both ap-



Blackboard Eraser Cleaner.

Pencil Sharpener.

pliances, it may be either an eraser-cleaner, or a pencil-sharpener, in case only one is needed. Every one knows the usual method of cleaning erasers by slapping them together, which covers the operator with chalk. The combination does its work quickly and well throwing the dust far away from the cleaner. The wheel brush is made of Tampico fiber, and will last for years.

The pencil-sharpener has a spool of sandpaper, having a fifty foot ribbon of the best flint paper, two inches wide, wound on it and firmly glued at the edges. When one circumference of sandpaper is worn out it is torn off and a new surface is ready. When a new spool of sandpaper is needed it can be sent by mail, with care the expense of sandpaper should not exceed fifteen cents a year for each room.

The pencil sharpener will appeal particularly to the drawing teacher, for any bevel may be obtained. Leads may be blunted, needle-pointed, lathed bare, or shouldered as desired.

When it is necessary to change the machine from an eraser-cleaner or *vice versa*, it may be done by adjusting two thumb screws—the work of about ten seconds.

The machine is strong and practically unbreakable, weighing about twelve pounds when boxed. It is invented, patented, and owned by a teacher who knew the demand for a machine which would clean erasers quickly and do the work of a good pencil-sharpener.

The Multiple Ruler.

A device which will be of much service to teachers of penmanship, music, and bookkeeping is the multiple ruler, manufactured by Peckham, Little & Company, 9 Clinton Place, New York.

To put the crayons in the tubes, first turn the gauges G. G. downward, as in the illustration and rest on a desk or any level surface. Then insert the crayons in the tubes at the top, and push them down with a pencil

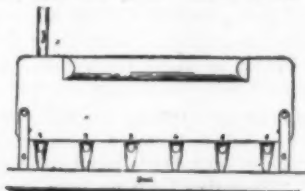


Fig 1.

or penholder, until each crayon touches the desk. The gauges are then to be turned upward and out of the way, as

about 60° with the blackboard, the springs on the upper side. To rule the board for music, remove one crayon from either end; for bookkeeping, remove three crayons, as in illustration

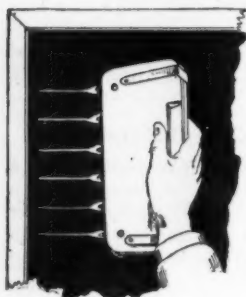


Fig. 2.

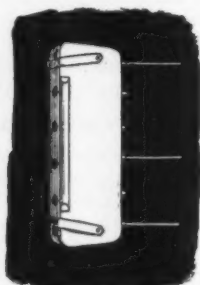


Fig. 3.

three. Care should be taken to press on the ruler sufficiently to make all the crayons mark.

Crayons are removed by pulling through the lower or smaller end of the tube.

Studies in Native Woods.

The Milton Bradley Company, of Springfield, Mass., have a series of "Studies in Native Woods," intended to aid in the study of familiar trees. There are sixteen sets, each one consisting of a lithographed card, showing the leaf, flower, fruit, and full tree, in their natural colors, framed in the wood of the tree described. In addition, two tablets of the wood, cut to show the side and end of the grain, are mounted on the card. A pamphlet giving a description of each of the sixteen trees, and describing the method of sawing, finishing, and polishing the wood, accompanies the studies.

Items from the School Supply Field.

Frost and Adams Co.'s "Catalogue of Artists' Materials and Mathematical Instruments" is a volume of 200 pages, describing and illustrating almost every possible want of the teacher of art, in its many branches. A convenient patent-folding



Patent Folding Drawing Table.—M'Pd by Frost & Adams Co., Boston.

drawing-table, described in the catalogue, is in successful use in *The School Journal* office. (Frost & Adams Co., 37 Cornhill, Boston, Mass.)

T. Y. Crowell & Company's new catalogue for 1897-8 is more specially attractive by numerous fine portraits of standard authors, accompanied by fac-similes of the autograph of each. Here are a few on the list: Thomas Carlisle, Charles Dickens, George Eliot, Richard T. Ely, George D. Herron, Victor Hugo, Washington Irving, Count Lyof N. Tolstoi. The same firm issues an attractive "Fall Announcement," replete, with handsome specimen illustrations from new and standard books. Write to T. Y. Crowell & Co., New York and Boston.

The New York city high schools are not fully enrolled and organized, and are being equipped as rapidly as possible. Leach, Shewell & Sanborn have received the full orders for algebras, Wells' "Essentials" having been selected.

The annual catalogue of Laird & Lee, Chicago, is a neatly gotten-up pamphlet of 35 pages, with numerous illustrations. This fall ends the first decade of the history of this house.

Despite the business depression, its affairs are in a satisfactory condition. In celebrating their first jubilee, the firm thank their patrons for past favors, and pledge themselves to renewed efforts to give satisfaction.

"How to Disinfect" is the title of a little pamphlet issued by the American and Continental Sanitas Co., 642 West 55th street, New York city. The chapter on disinfecting floors and walls is worth the attention of school officers. The price is ten cents.

The Illustrated Trade Catalogue of Thomas Nelson & Sons' publications, Union square, New York city, contains their new series of teachers' Bibles, prayer books, hymnals, juvenile, miscellaneous, and standard works, Sunday-school cards, and toy books. Specimen pages from their distinctive editions of Bibles are helpful to those purchasing by mail.

The Smith Premier Typewriter Co., Syracuse, N. Y., has issued an ingeniously-devised circular, showing "Our Juvenile Class" at work on the machines. Thirty-seven photographs of little people, of all nationalities, and in pretty costumes are given.

Day's Atomic Chart shows the atomicities of all the elements, together with the names, chemical symbols, equivalent and atomic weights. It is prepared and published for the use of students of chemistry by Willard G. Day, Baltimore, Md.

Hinds & Noble are sending out to teachers 100,000 of their new catalogues of general school books of all publishers, second-hand and new. They will esteem it a favor to be notified by any teacher who may fail to receive a copy.

Souvenir of the A. W. Faber Co.

In Germany, as early as 1726, lead-pencils were manufactured, in a small way, out of the newly-discovered mineral, plumbago. Thirty-five years later, the now celebrated Faber pencil makers began their work. During successive generations of the Faber family, the business underwent important changes, the production of the pencils being characterized with increasing improvements. In 1843 an agency was established in the United States, and later in Paris, London, Russia, Italy, and the Orient, Australia, and South America.

Branching out from the sole creation of the lead-pencil, the firm, now so celebrated, under the name of A. W. Faber & Co., manufactured copying inks, pastels, writing slates, slate-pencils, graduated wooden scales, triangles, and mathematical rulers. A "Historical Sketch" of the A. W. Faber Company, from its inception to the present day has just been issued, and is an interesting story of this enterprising, progressive, and successful house. The letter press is handsomely illustrated, with seventeen full-page colored plates, in which the process of manufacturing is exhibited. An etched portrait of the late head of the firm occupies the frontispiece.

Anti-Dust Floor Dressing.

Anti-Dust is an invention intended to banish dust from the floors of school buildings, offices, etc. It is a scientific combination of oils, which penetrate deeply into the wood, and is therefore a preservative of floors. There is almost a perceptible moisture, which kills the dust as soon as it reaches the floor, and prevents its rising even when the room is being swept. It is never gummy or sticky, however, even when drying, and if necessary the floor may be used at once.

The durability of Anti-Dust depends upon the condition of the floor, and the amount of wear it receives. Ordinarily one application will last from three to six months. It may be applied to hard or soft wood with the same results. If the floor is new, the preparation will keep it so; if it is old, worn places can be touched up and made to look like the rest. It does not darken the floor so much as hard oil finish.

The floor should be clean before applying Anti-Dust; the cleaner the floor the better will be the result. For applying use a clean mop or cloth, and put on freely, but evenly, going over it with a dry mop, rubbing in well. A gallon will cover from 400 to 600 square feet of surface.

For further particulars address J. H. Harris, 600 Grand avenue, Milwaukee, Wis.

Reading Charts.

Child-Life Chart.

"The Child-Life Reading and Education Chart," by Mary E. Burt. (Ginn & Co.), supplies reading matter, which is properly graded and phonetically arranged, but it also makes use of the child's surroundings to develop its power of perception, observation, concentration, memory, and will. By means of easy conversation with the teacher, reinforced by blackboard work, the child is unconsciously put in possession of words. He recognizes print before he knows that print is what he is trying to master, and the use of script is acquired almost unconsciously, his mind being employed with the thought to be expressed, rather than in the mode of expression.

The lessons are arranged phonetically to a great extent, and are so graded that the vocabulary averages about a word a day for the school year. Much attention is paid to word building, and reviews in which old words are repeated in new sentences.

In order to familiarize the child with the best literature, a number of classic poems and stories are supplied. Suggestions for the study of such elementary number lessons as may be correlated with the lessons are given on each page. Practical suggestions for hand work and color work are also given.

The chart contains about one hundred and fifty illustrations, more than thirty of which are copies of great works of art. Among these are Millet's Gleaners, La Rolle's Sheep and Shepherdess, Raphael's Madonna de Tempi, and Sir Joshua Reynolds' Angel Choir. All of the sketches to illustrate nature studies were done from life, and at its first hand. While preparing this work, Miss Burt made three visits to Europe, visiting the art galleries and the schools. She has spent five years working on this chart, assisted by her publishers, who have spared nothing which could forward her work.

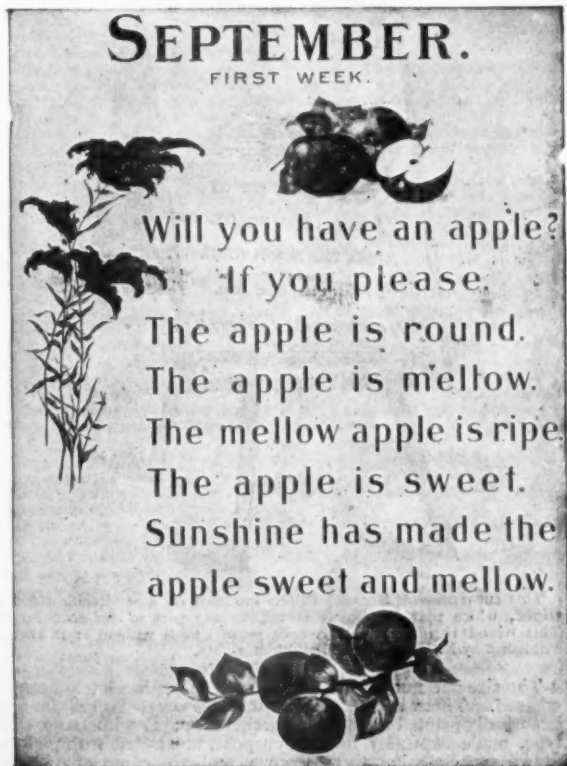
The chart, which contains 50 pages, is printed on tinted rope-manilla paper, and illustrated in black and colors. The size of the paper is 30x36 inches. Ginn & Company are the publishers.



Specimen page from Child-Life Primary Reading and Education Chart. By Mary E. Burt, published by Ginn & Co.

Tooke's Reading Chart.

The Reading Chart, by Miss Mary E. Tooke, is not only intended to teach children to read, but it is an aid to nature



Specimen page from reading chart of Miss Mary E. Tooke. Published by W. A. Olmsted, Chicago.

study and the cultivation of patriotism. The chart covers the entire work of the school year. One page is devoted to each week of the month, and treats of the different phases of nature prominent at that time—either plant or animal life—while the last page of each month reviews the month's work. The value of this continuous work in quickening observation and exerting a wholesome influence on the character will be obvious to the teacher. The dominant idea is to associate the first reading lessons with the natural life daily surrounding the child's life during its most impressionable period; thus the child gains ideas of value, and retains naturalness of expression.

The motive of the chart is to lead teacher and children to a more intimate acquaintance with the woods and fields, to a closer observation of the natural life about them, and so to a general love of nature. To this end, the illustrations of fruits, flowers, animals, and other objects are colored true to life.

The reading matter is original, and has special reference to the illustrations. It is given in large, plain type, and in handsome vertical script.

The paper is of a fine quality of manilla stock, coated white, bringing out the colored illustrations in beautiful contrast. The chart contains forty-five lithographed sheets, each sheet 26x36 inches, mounted on a standard of new and improved pattern.

The publisher is W. A. Olmsted, 215 and 217 Wabash avenue, Chicago.

Normal Primary Reading Charts.

The Primary Reading Charts of the Normal Course in Reading have been prepared to meet the demand for material for use with beginners. The charts are arranged for use in immediate connection with blackboard work, and to a large extent, may be made to take the place of such work, thus saving the time of the teacher.

The subject matter has been judiciously chosen and carefully arranged. The words used are mainly those which form a part of the vocabulary of the average child of six or seven years. New words are introduced gradually in accordance with the thoughts the words convey. In order to provide for the development of words according to simplicity of form, several pages of the chart are devoted to word building, thus adding largely to the



number of words presented in the reading lessons. The charts were prepared to teach children to read; all other thoughts were made subservient to this; hence the large amount of reading matter furnished.

A special feature is the provision for drill in the enunciation of consonant words. While vowel sounds are secured with comparative ease, the rendering of the various consonant elements requires greater care and patient drill.

Another valuable feature is the page devoted to color and form, which cannot fail to appeal to teachers.

The authors of these charts are Miss Emma J. Todd, formerly training teacher in the public schools of Aurora, Ill., and W. B. Powell, superintendent of schools, Washington, D. C.

The script was drawn by Prof. D. H. Farley, one of the authors of the "Normal Review System of Writing."

NO. II.

black black
have have
my my
m m m m m m m



I have a pony.
I have a black pony.
See my black pony.

I see a boy.
I see a black pony.

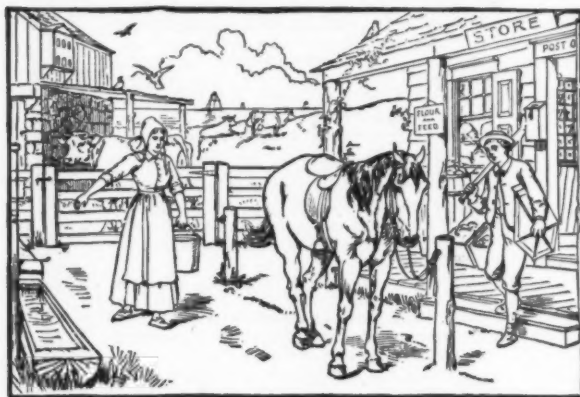
Exact representation of Chart No. II. of Primary Reading Charts, Normal Course in Reading. Reduced by photography. Size of Chart, 29 x 35 inches. Published by Silver, Burdett & Co., Boston.

The charts come in forty-eight numbers, beautifully illustrated, and printed on superior rope-manilla paper.

For particulars, address the publishers, Silver, Burdett & Co., Boston, New York, Chicago, and Philadelphia.

Butler's New Reading Charts.

E. H. Butler & Co. publish also another set of reading charts in 36 numbers. By the plan of gradation each chart increases



Specimen illustration from Butler's Reading Charts.

the pupil's vocabulary by a limited number of new words, which are reproduced in script and diacritically marked. Every fifth chart is a review lesson in which the words previously learned are arranged in new combination. The charts are clearly printed on fine paper, and beautifully illustrated.

Monroe's Primary Reading Charts.

These were the pioneer charts for teaching reading to begin ners. These charts may be used as an introduction to any series of reading books. In each new lesson a single sound is added, and is used in sentences, associated with a pleasing picture. It is next to impossible for a child to read a lesson from one of these charts in a humdrum style. The thoughts are so natural that they almost "say themselves."

Beautifully engraved script lessons have been added, and a supplement contains a graded series of drawing lessons.



This cut represents Monroe's Charts mounted on a serviceable stand or tripod, which may be readily moved to any part of the school-room. This tripod is furnished with each set of Charts without extra charge. Published by E. H. Butler & Co., Philadelphia.

The size and number of the Monroe charts has lately been increased. There are 58 separate charts, 25x34 inches in size, beautifully printed on manilla parchment paper with large, clear type, made expressly for the purpose, illustrated with pictures drawn especially for these lessons, and are compactly bound. They can be seen from all parts of the school-room.

For particulars address E. H. Butler & Co., Philadelphia.

Books Under Way.

American Book Company.

Astronomy for Beginners, by David P. Todd, M. A., Ph.D., professor of astronomy and director of the observatory, Amherst college, is designed for students in high schools, and academies preparatory schools. It is a simple, scientific practical and interesting text-book fully illustrated and thoroughly up-to-date.

Natural Advanced Geography, by Jacques W. Redway, F. R. G. S. Based on new and thoroughly sound ideas of teaching. This book, like the Elementary Geography of the same series will present important novel features unknown to other text-books on this subject and which, it is believed, will commend themselves to all progressive educators.

Dix Contes Nouveaux, edited with notes and vocabulary by C. Fontaine, director of French instruction in Washington City schools. A collection of stories from the writings of Thuriot, Blacke, Halevy, Rameau, Chotel, Veron, Cheneviere, France, Coppee, and Ariehe. This is the latest addition to the successful series of Modern French Texts which now includes Guerber's Contes et Legendes, Parts I. and II.; Mairet's La Tache du Petit Pierre; Nodier's Le Chien de Brisquet; Woodward's Racine's Iphigene and the volume mentioned above.

Ward's Graded Course in Penmanship and Spelling, will be published in two sizes, large and small, six numbers of each size.

Dana's Text-Book of Geology, complete and thorough revision of this standard work for high schools, academies, and colleges.

Xenophon's Croyopaedia, by C. W. Gleason, master in Roxbury Latin school.

The new and in every way admirable series of Eclectic School Readings, will shortly be extended by the addition of Clarke's Story of Aeneas, and Larke's Story of Caesar.

Lessing's Minna Von Barnhelm, by M. B. Lambert, instructor in German, Boys' high school, Brooklyn, N. Y., is to be added to the well-known Modern German Texts, which have become so popular with teachers and students of German.

Latin Prose Composition, by C. C. Dodge, instructor in Salem, Mass., high school, and H. A. Tuttle, instructor in Brooklyn Polytechnic institute.

A new series of writing-books in the vertical style is in preparation by Professor C. C. Curtiss, for twenty-four years principal of the Curtiss Commercial Schools of Minneapolis and St. Paul. The series will comprise six numbers.

School Reading by Grades. Seven numbers of this remarkable series of school readers have already been issued, and the eighth volume which will complete the series will be published immediately. For the convenience of graded schools and for all others who prefer them in that form, the first seven numbers of the series will also be published in five volumes corresponding to the regular five book series of school books on reading.

Geographical Nature Study, by Frank Owen Payne, principal, public school, Gen Cove, N. Y., is an elementary text-book designed to precede the regular series of school books on this subject.

Stories of Ohio, by William Dean Howells, and Stories of Indiana, by Maurice Thompson are nearly ready and will be published in the new series of State Histories which at present includes Stockton's Stories of New Jersey, Joel Chandler Harris's Stories of Georgia, and J. R. Masek's Stories of Missouri. These state histories by eminent authors are attracting wide attention not only for their literary qualities but also for the attractive appearance of each volume mechanically and artistically. The illustrations by leading artists are characteristic of the localities which they depict.

D. C. Heath & Co.

Freshman Composition, by Henry G. Pearson; with introduction, by Arlo Bates, professor of English in Massachusetts Institute of Technology. Manual for college classes. Cloth. About 150 pages.

Tennyson's Enoch Arden, Locksley Hall, and Locksley Hall Sixty Years After, by Calvin S. Brown, Vanderbilt university. Cloth. Illustrated.

DeQuincey's Flight of a Tartar Tribe, edited by Professor G. A. Wauchope of the University of Iowa. Illustrated. Cloth.

Milton's Paradise Lost. Books 1 and 2, with selections from the later books, edited by A. P. Walker, master in the English high school of Boston, Mass. Cloth. Illustrated.

From September to June With Nature. A Reader for first and second year pupils, by Minetta L. Warren, of Detroit, Mich. Illustrated. Boards.

Roger Ascham's Scholastic Master. Volume 33 in Heath's Pedagogical Library.

Thompson's Day Dreams of a Schoolmaster. Volume 33 in Heath's Pedagogical Library.

Experimental and Practical Physiology, by B. P. Colton, professor in the Illinois State normal university. A practical guide for the laboratory study of physiology in high schools, normal schools and colleges. Illustrated. Cloth.

The Herbartian Psychology Applied to Education. A series of essays on practical pedagogics, by John Adams, principal of the Aberdeen free training school. Heath's Pedagogical Library, Volume 31.

A Course in Experimental Psychology. By E. C. Sanford, professor in Clark university, Worcester, Mass. A revised and enlarged edition.

Voltaire's Prose Selections, with introduction and notes, by Professor Cohn and Dr. Woodward, of Columbia university, New York.

Goethe's Faust. Part II. Edited by Calvin Thomas, professor in Columbia university, New York.

Moser's Der Bibliothekar, with introduction and notes, by B. W. Wells, professor in the University of the South.

An Elementary, Scientific French Reader, by Professor Pauline Mariette-Davies.

Chateaubriand's Atala, with introduction and notes, by Professor Kuhns, of Wesleyan university.

Spyri's Moni Der Gletschub, with notes.

The Macmillan Co.

Elements of Grammar, by George R. Carpenter, professor of rhetoric and English composition in Columbia university. Author of Exercises in English Composition and Rhetoric.

A Student's History of the United States, by Edward Channing, professor of history in Harvard university. Author of The United States, 1765-1865. Cambridge Historical Series. Fully illustrated with maps, portraits, etc.

Cameos from English History. Ninth Series, by Charlotte M. Yonge. Globe 8vo.

A History of Rome for Beginners, by Evelyn S. Shuckburgh, M. A., author of A History of Rome, etc. Illustrated. Crown 8vo.

There has long been needed a text-book on Roman history which is suited to the present requirements of the college entrance examinations. At one time the so-called primers of the history of Greece and Rome supplied all that was considered necessary for a student to know before entering college, and it has been difficult since to find a text-book at once brief enough for the limited time which the high school student can give to the subject, and full enough for use according to modern methods of teaching. Admirably suited to the use of high schools and college preparatory schools is this Short History of Rome by E. S. Shuckburgh, whose larger work on The History of Rome to the Battle of Actium is already so well known. The Short History is well supplied with maps, plans and a few illustrations. Each chapter is preceded by a brief topical outline which is carried through the chapter also in paragraph headings. The last chapter contains a noticeable summary of the condition of the Roman empire under Augustus, with a brief sketch of the study of literature and art under his protection, and the influence he extended over his wide dominion.

An Elementary Treatise on the Theory of Functions, by James Harkness, associate professor of mathematics at Bryn Mawr college, and Frank Morley, professor of mathematics at Haverford college, authors of A treatise on the Theory of Functions.

Differential Equations, by J. M. Page, adjunct professor of mathematics at the University of Virginia.

Infinitesimal Analysis. Differential and Integral Calculus of Functions of Real Arguments, by William B. Smith, professor of mathematics in the Tulane university, New Orleans; past professor of mathematics in Missouri State university, Columbus, Mo. Author of Introductory Modern Geometry of the point, Ray and Circle. Vol. I.

This volume treats rather fully and in a modern spirit the Elementary Theory and Applications of the Calculus, so as to meet the wants of undergraduates in general, while fitting and stimulating the few to press on into differential equations and the Theory of Functions. More than usual attention has been given to hyperbolic functions, maxima and minima, operators, tortuous curves, partial derivatives, multiple integration, Jacobians, gamma-functions, etc.

The Pruning Book, by L. H. Bailey, professor of horticulture, Cornell university.

The Dawn of Astronomy, a study of the temple worship and mythology of the ancient Egyptians, by J. Norman Lockyer, F. R. S. Author of The Chemistry of the Sun, Elementary Lessons in Astronomy, etc. With many illustrations. New and cheaper edition. \$2.50.

A Text-Book of Entomology, by A. S. Packard, professor of zoology and geology in Brown university.

It will meet a large demand in all parts of the world, as it brings together as nowhere else, and with great skill, a vast digested mass of information in every field of entomological research. There is nothing like it in any language. It contains the latest data and emphasizes the biological side, now of prevailing interest, rather than the systematic.

Birdcraft, by Mabel Osgood Wright, author of Tommy-Anne and the Three Hearts, Citizen Bird, etc. New and cheaper edition, with illustrations from nature by Louis Agassiz Fuertes.

Even if this volume were devoid of illustrations, and depended entirely on its letterpress for success, it would be welcomed as an addition to English literature. It is more than an accurate and comprehensive description of all the birds one is likely to find in an extended search. It is also an introduction to them and their haunts, so enticingly written that the reader at once falls in love with them and becomes an enthusiast in their pursuit.—"Evening Telegraph," Philadelphia.

Life Histories of American Insects, by Clarence M. Weed, D. S. C., professor of zoology and entomology, New Hampshire College of Agriculture and the Mechanical Arts, and associate editor of the "American Naturalist." With many illustrations, full page plates and smaller cuts in the text.

In this book the author has brought together a series of sketches of the life histories of a considerable number of the most interesting American insects. The life of each is described in a plain and simple manner, with as little technical phraseology as may be; a large number of illustrations help to render the text more clear. Among the insects treated of, the giant water bugs, tiger beetles, click beetle, crickets, grasshoppers, the army worm, the cecropia moth, various leaf miners, wasps and hornets may be mentioned as well as the ichneumon flies, plant lice, spiders and ground spiders.

The book will help to introduce young readers to entomology, and is likely to prove particularly helpful to teachers of nature studies. It is one of the books available for use as scientific supplementary reading.

University Publishing Company.

Standard Literature Series.

Robinson Crusoe illustrated, single number, edited by Dr. Edward R. Shaw, New York university, 12½ cents, paper; cloth, 20 cents.

Ivanhoe (condensed) double number, 20 cents, paper; 30 cents, cloth.

Poems of Knightly Adventures, single number, 12½ cents; cloth, 20 cents. This number includes four complete poems with notes, by Prof. Edward Everett Hale, Jr., Ph. D., Union college, Schenectady, N. Y., viz.—Tennyson's Gareth and Lynette, Lowell's Vision of Sir Launfal, Macaulay's Horatius, and Matthew Arnold's Schrab and Rutum.

Water-Witch, condensed, by Cooper, double number, with notes and historical introduction Colonial history of New York and Long Island near beginning of the 18th century. Paper, 20 cents; cloth, 30 cents.

Maynard, Merrill & Co.

Selections from L'Homoide's Viri Romæ, and Cornelius Nepos, edited by John T. Buchanan, principal of Boys' Classical high school, New York city, and R. A. Minckwitz, teacher of Latin and Greek, Central high school, Kansas City, Mo. Price, 60 cents.

Modern Book-keeping. Single and Double Entry, by J. L. Montgomery, instructor in book-keeping in the Columbia Grammar school, New York city. 240 pages. Crown 8vo. cloth. Price, 80 cents.

This book is intended for high schools, academies, and the upper grades of grammar schools, and will be found so simple and well arranged that it can be used successfully by teachers who have had little or no previous experience in teaching the subject.

Blank Books to accompany Montgomery's Modern Book-keeping: Day Book, Sales Book, Journal, Cash Book, Bill Book, and Ledger. Price, per set of six books, 60 cents.

Read and Kellogg's Higher Lessons in English and Word-Building, 464 pages. Price 68 cents. The chapter on word-building gives work in roots, or stems, prefixes and suffixes, and a brief history of the English language.

Maynard's English Classic Series:

No. 187. Curtis's The Public Duty of Educated Men. Price, 12 cents.

" 188-189. Hawthorne's Twice-Told Tales. Price, 24 cents.

(Continued on page 344.)

Notes of New Books.

As might be expected from the author of a "History of the People of the United States" the new "School History of the United States" by John Bach McMaster, just issued by the American Book Company, is exceptionally rich in facts and descriptions illustrating the social and industrial development of the American people. At the same time the important events and periods in our political history are treated with great clearness and ability—no detail necessary to a proper understanding of a particular subject being lost sight of, yet all so grouped as to give in each instance a comprehensive view. The work is rendered still stronger for school purposes by succinct groupings of the main facts in particular periods and places of our political development, so brought into the text that the pupil may get as in a nut shell a view of the particular subject he is studying. The book, which contains about 500 pages, neatly printed, abounds in many excellent maps, some of them—notably those illustrating the Oregon and Maine boundary line disputes—being of exceptional interest. How the people have worked, thought and lived during the different periods of our history, and our marvelous growth in invention and material prosperity are strikingly suggested in many fine illustrations scattered throughout the book. The last chapter contains an account of the recent financial depression, with a statement of causes and results, of the election of President McKinley and of the adoption of the new tariff. Not a little value is added to the book by the outline summaries of important events following the different chapters. The price is \$1.00. (American Book Company.)

The almost simultaneous appearance of Prof. George Hempl's "German Orthography and Phonology," and Prof. Hermann Paul's "German Dictionary" will mark a new era in the German instruction of this country. The former accounts for the present form and pronunciation of the language by pointing out the principles of its development; the latter adopts the same method to explain the present meaning of German words.

Prof. Hempl's work is of particular interest, because it is the first book of such importance that has appeared in our country on this subject. The first volume elaborates the principles, which have had an influence in shaping our present language. The second volume, which is announced for the near future, is to consist of a word list, in which the pronunciation of every word is to be given exactly in phonetic transcription. Every irregularity will be marked, and a text reference will refer the student to some principle set forth in the first volume, which will adequately explain the same.

In order to account properly for present usage, the author has very largely presented the subject historically. In accordance with this plan, the first chapter is devoted to the history of the German alphabet. This will be received kindly by all who have had occasion to work with older German texts. In addition to compiling the most interesting facts that were known on this subject, Prof. Hempl has thrown new light on a form, which he calls Half Gothic, and which he shows to be a natural development of the strict Gothic.

In determining the present orthography, the writer has not only made use of historical grammar, but has taken into account the various official spellers of the German governments, and has shown the main lines of divergence. Dialectal differences are carefully noted; especially when they have any influence upon high German.

The vexed subject of capitals has received a similarly inclusive treatment. The views of the different schools are presented, and the part that the development of words has played is explained. What is said on the subject of punctuation is particularly important, because the difference between German and English usage is emphasized.

In phonology, the author has based his work upon principles agreed to by the most eminent scholars. He deserves special credit for compiling and applying these principles so successfully to the language of to-day.

The exceedingly intricate subject of word and sentence stress is treated at length, and here again Prof. Hempl has many new things to offer. This chapter makes the book especially helpful to foreigners, for to them there is nothing as puzzling as the shifting of stress, when there is apparently no reason for the same. Wherever shifting of stress occurs the author has noted the fact carefully, and has referred to the principles, which together, or through cross influence, cause it.

But there are other reasons why this book commends itself to English students and teachers. The author has a wide knowledge of English and American dialects, and, wherever feasible, he has explained the German by means of the English. In the foot notes he frequently calls attention to the errors which English-speaking persons are liable to make when learning German, and many practical hints are given, which will aid the learner in producing sounds that are peculiar to German.

It appeals, however, to the language teacher in general, by offering an interesting, yet fairly comprehensive introduction to the subject of phonetics. It calls attention to the value of historical grammar (vid. Report of Committee of Ten on Teaching of English) by applying the principles deduced from that subject to our present speech. The excellent system of cross references makes the book an admirable one for those who approach these subjects for the first time.

On the whole, this work, together with its German companion, will do much to remove the stigma which now so justly rests on much of our language work. These books will place into the hands of the teacher the material necessary to enable him to account for language phenomena, instead of making dogmatic statements about them.

Paul H. Grumann.

Indianapolis.

The Riverside Literature Series has had a vast influence in the development of a taste for our national literature. But the student's culture should be wider than that; hence the publication by the same firm of a series of translations of great world poems. Our readers will remember that Bryant's "Iliad" lately appeared: we now have "The Æneid of Virgil," by Christopher P. Cranch. This has been called the best translation of Virgil's great epic; it gives the narrative in smooth blank verse, the translator showing a poet's appreciation of the niceties of language of the Roman bard. This book will be a valuable addition to the collection of those who cannot study Virgil in the original. (Houghton, Mifflin & Co., Boston. Crown 8vo, \$1.00, net.)

One of the greatest works of French fiction is "Les Misérables," by that incomparable master, Victor Hugo. The story of Jean Valjean has been taken from this by Sara E. Wiltse and edited for young people. It is a study of character—the development of a victim of social disorder, toiling in the galleys, into the good citizen and philanthropist. The book is issued in the series of Classics for Children, and is neatly bound in boards with cloth back. (Ginn & Co., Boston.)

The object of the "Analytic Geometry" of P. A. Lambert, M.A., instructor in mathematics, Lehigh university, is to furnish a natural, but thorough introduction to the principles and applications of this branch of mathematical science for students who have a fair knowledge of elementary geometry, algebra, and trigonometry. The presentation is descriptive rather than formal. The numerous problems are mainly numerical, and are intended to give familiarity with the method of analytic geometry rather than to test the student's ingenuity in guessing riddles. (The Macmillan Co., New York. \$1.50.)

The learning of spelling will be made much easier by the use of the "Advanced Speller," by Rebecca S. Pollard, originator of the synthetic method of teaching reading. It is designed to give pupils the power to pronounce and spell words independently and correctly; to train them to habits of noting with accuracy the component parts of a word, and, without reference to the dictionary, to form an opinion of its correct pronunciation. The rule is given along with a selected list of words illustrating it, so that the forms of the words are impressed on the memory. For the details of the method, we refer the reader to the book itself. (The Western Publishing House, Chicago, Ill.)

The poetry of nature—that is what children enjoy, and to a large extent understand; as one may prove by referring to his own childhood days. A reader entitled "Nature in Verse," by Mary I. Lovejoy, compiled for the lower grades of schools, is composed of selections from many writers. It is intended to cover the first four years of school work, and will make the pupil acquainted with a large part of the poetical literature on this subject. The selections have been carefully graded, with a view to adapting them to the varying ages and needs of those who will use this book. A division has been made into songs of spring, summer, autumn, and winter, plants, flowers, insects, birds, clouds and wind, rain and snow, and other phenomena from the subject of diverse poems by different authors. (Silver, Burdett & Co., Boston.)

The Romans were the most masterful people of ancient times, else how could they have extended their sway from an insignificant city over all Italy and finally over the entire civilized world? In spite of the intellectuality of the Greeks they lacked the qualities of rulers. The Romans are in many respects like the modern English. What was the secret of the Romans' success? It must be sought in their personal qualities and mode of life, a full description of which is found in the volume of the Chautauqua Reading Circle series, entitled "Roman Life in Pliny's Time," by Maurice Pellison, translated from the French by Maud Wilkinson, with an introduction by Frank Justus Miller, of the University of Chicago. Roman civilization was then at its height, and it is described minutely, and yet in a way that will interest and instruct. The many beautiful illustrations add greatly to the value of the book. (Flood & Vincent, New York, Cincinnati, and Chicago.)

Letters.

Individual Expression.

It was the fortune of the writer, not long ago, to visit a school building in a town which is famed throughout the country for its schools. Four grades were visited, the first, second, third, and ninth, and four hours spent in those four grades. Lessons in writing, reading, arithmetic, language, grammar, and botany were observed, and it was only during the last seven minutes of the visit to the ninth grade that the visitor heard a single expression of individual opinion or thought from a single pupil. Of course, it may have been a mere happen-so, and the pupils may be in the habit of expressing themselves freely concerning the subject matter of their lessons, but certain it is that they did not so express themselves that morning.

The teachers talked more or less, and the pupils read, solved problems, recited arithmetical rules and grammatical rules, placed apostrophes, and wrote from copies, but until the teacher of the ninth grade asked her pupils each to give back to her one thought from the chapter which she had just read aloud, not one utterance from one pupil had shown the ability to construct an English sentence.

In forty-eight hours of visiting, spent in schools of good repute, where the new education is popularly supposed to dwell, but very little language which expressed the individual thoughts of pupils has been heard, until the higher grammar grades were reached.

The children read, and nothing was said about what they read. They studied spelling lessons, and defined the words by meaning synonyms, which their books furnished. If the teacher asked for a sentence containing a particular word they gave a phrase and sat down. They observed buds and blossoms, and answered the teacher's somewhat lengthy monologue by words or sentences, which were wrong, because, although they expressed the speaker's general meaning clearly enough, they did not employ the grammatical form required by the questions as put.

Now, a good deal of the business of this life is carried on by means of speech. Conversational powers are not a luxury for the rich, by any means, but an absolute necessity for all social grades. This truth would seem to be self-evident.

Then, too, all children cannot learn to speak properly at home. Children from homes where they hear poor English, or a foreign language, must learn to use English correctly at school. It is not enough for them to hear correct English; they must speak it aloud for themselves, and accustom their ears to the sound of their own voices, using something besides the jargon which they employ at home and in the playground, for the purpose of expressing their thoughts.

If practice in oral expression is necessary to the successful requirement of a knowledge of a foreign tongue it is certainly necessary for the acquirement of fluency in the native language, as well.

All well-arranged courses of study now recognize the need for such practice, and provide for it. Pupils are expected (by the makers of the courses of study)

to express themselves freely concerning nature work, reading lessons, and number lessons. The courses of study issued by every one of the cities and towns in which the forty-eight hours, before mentioned, were spent, specifically state that pupils are expected to so express themselves, and that they are to be encouraged at all times to put their thoughts into words.

What is the matter? Who can tell? Promotion time looming ever nearer, perhaps, when a certain proportion of the pupils must be promoted, to make room for their successors; or the general indefiniteness of results, so far as any instruction in oral language goes; or, and this is a most important factor, the extreme difficulty which every teacher experiences in holding the attention of a large class of primary children during a lesson in oral language.

The reasons partially explain, but they do not, by any means, excuse the lack of individual expression of thought, in spoken language, by the pupils of our schools.

Quincy, Mass.

Mabel Ellery Adams.

"Freedom in Promotion."

A Rejoinder.

Wm. H. Shearer's spicy letter in *The School Journal* of September 18 is perused with much pleasure; and permit me to say that there is nothing that more potently conduces to my happiness, than to stand knee deep in the agitated waters of educational discussion; while from the slimy waters of the stagnant pool of pedagogical self-sufficiency, I flee, as from the plague.

Begging the gentleman's permission to regret that *there is nothing so uncertain as certainty*, I wish first to correct his impression as to my identity. I am so fortunate as to be a — woman; *not* a man.

Again the gentleman says:

"I regret that he forgot to refer to his earlier articles on the subject." Allow me to explain that I had never written any formal articles upon the subject, to which I might refer; and that I did not claim to have originated the idea of "freedom in promotions," "close classification," etc., of which I spoke; I said that such a plan had been encouraged by the superintendent, and quite freely practiced;—or to that effect. (I regret that I have not a copy of the letter, for reference.) Yet, while I have written no formal paper upon the subject, it has been a point of discussion at principals' meetings many times during the last twenty years; and the thoughts generated, all along the line of those twenty years, by principals and superintendents, have been crystallized by the superintendent in the following, chipped from the "annual report of the public schools of Kansas City, Mo., 1892-93":

STICKING IN THE GRADES.

There are certain miry places, apparently, in the grade work. In order to bring this matter more especially to the attention of the principals, it was decided that an item in the term report containing a time element should be included. Under the present arrangement, the time allotted for completing a year's work is nine months. There are occasionally adverse conditions, which may prolong this time limit. For the average teacher with average children, the time prescribed is sufficient in which to do the work if it is properly parceled out. But when the children are ir-

regular in attendance, or do not come up from the lower teacher well prepared, or there is a large influx of pupils from the outside, it is then a difficult matter for even a skilful teacher to take a heterogeneous mass of pupils not well classified, and make the same progress that she could do with pupils well drilled and well graded. It is the difference between handling a well-disciplined regiment and a mob consisting of the same number of persons. A teacher, to do the most effective work, simply organizes her pupils and puts them to work in the most rational manner. Notwithstanding the fact that a large majority of pupils make a grade each year, there are always found some stragglers who, for various reasons, drop back. The cause may be sickness, irregularity of attendance, inability to do the work, absence from the city, idleness,—in fact, almost everything one can imagine.

To get at this matter in a tangible manner, the principals of the several ward schools were requested to ascertain and report the number of pupils that had been just 9 months in a grade, the number twelve months, the number fifteen months, and the number eighteen months. Of twenty-five of the thirty-three schools reporting, the following is given: 6,159 pupils, just nine months; 1,659, twelve months; 268, fifteen months; and 143, eighteen months. In this connection, it is also well to bear in mind, that the daily attendance is usually about three-fourths of the total enrollment. This is fairly well illustrated by the number of pupils nine months in a grade, and those who have been twelve months on the corresponding work.

To put the case in a more practical form, of every one hundred children now in the ward schools that attended school last year, seventy-five have done a year's work within the required time—nine months; twenty required twelve months; three, fifteen months, and this leads up to

INTERVALS BETWEEN CLASSES.

There is more of confusion and darkness regarding the intervals between classes than there is concerning any other phase of school work. It probably results from a cloudy interpretation of the functions of the graded school system. A yearly interval between classes in large school systems is unjust. Yet, it is a fact, I regret to admit, that there are many cities in which a procrustean method of classification prevails. In one of these numerous educational systems, all the pupils of the first or lowest grade last September entered upon the first year's work; all in the second grade started at the beginning of the second year's work, and so on up through the eighth grade. The interval between classes of two consecutive grades is one school year. All of a grade start at a given page and work along to another given page in each subject of study.

The plan may be illustrated by a homely comparison. It is like a regiment of soldiers, with eight companies, starting in a given direction; but with intervals or spaces between companies of just two hundred days' march. If a member of company "A" gets lame, and cannot keep up, he falls back, and is picked up by company "B." The weak soldier of company "B" drops back two hundred days, and begins the march with company "C," and so on down to the last, which has all the march before it.

Where promotions are made every half year, the evils mentioned above are greatly reduced. Yet, there are many who claim that yearly or half-yearly intervals are correct. Convenience is almost a god with some people. It is to me a strange thing that men who have watched the progress of school work for years would fail to see that there is but one advantage in keeping pupils so far apart in their classification, and that advantage is, in enabling the superintendent to make out, with little exertion, uniform questions for each class. I can discover no other reason for this unjust method of grouping pupils. Other reasons may exist, but I cannot find them. The convenience of teachers, principals, and superintendents is a vicious thing to put against the interests of the pupils.

Any plan of work which does not rest upon a foundation of common sense is not worthy of use, no matter how old or how new it is. Human beings are not like corn in all respects. To plant corn in rows is all right; but to plant children in intellectual rows, and keep them as straight, and as well aligned for a year at a time, with no chance to move ahead or back, and then replant them the next September in the same rows, one year ahead, or one year behind, is too rigid a system to be sensible. Children do not grow so evenly as a field of corn.

The schools of this city are run on a plan of grading which makes promotions come every three months, at least. No calamity has resulted from this. On the contrary, short intervals between classes afford an opportunity to classify the schools much closer than the long interval plan will permit. Each grade is divided into three classes: C, B, and A, the last named class being the highest one of the grade. Suppose a pupil enters upon the work of the B class of the fourth grade in September. If he is of average ability, and regular in attendance, in three months' time he should be ready to enter upon the work of the A class of the fourth grade. Like conditions prevailing, he should be promoted into the C class of the

fifth grade in three months' more time. At the end of the school year of nine months he should have mastered the course as laid out for the B and A classes of the fourth grade and the C class of the fifth grade.

Let us look into the question from the side of justice to the pupil. If, for any cause, he cannot keep up with the class, he may enter a class but three months behind without detriment to the class into which he goes. Again, a pupil with unusual powers may easily bridge over the work of a three months' term; but an attempt to put him ahead a whole year would be liable to stretch the intellectual activity out of him. Short intervals between classes are the only means by which the graded school systems may maintain a close classification and not be procrustean. Having three classes in each grade, and seven grades below the high school, there are twenty-one intervals and twenty-one promotions in the ward schools. Instead of having a chance at promotion once a year, our pupils have three chances each year.

Children have not the power of picturing remote ends. There is an inspiration in close classification and frequent promotions. The reward for application to study comes often enough to act as a stimulus to industry. And the fear of failure to make a term's work every three months, brings the consequences of idleness and neglect to the mind of the shirk before it is too late for him to mend his ways. The hope of reward and the wholesome fear of consequences that follow idleness are brought within the range of pupils. The faithful ones move on by easy steps, and the indolent and the weak drop back, or rather, permit the next class below to catch up with them.

In some of the largest schools, classes are frequently but six weeks apart. The advantage to the pupil is great. One who cannot attend on account of sickness or other reasons easily finds a class which he may enter without loss of time, or without stretching his mental powers beyond endurance. The following detailed account of the grading of four of our schools, just as they were found a few weeks before the close of the present year, will aid any person to discover a method of grading and promoting which rests upon the belief that schools and grades are for the convenience and benefit of the pupils, and not for the ease and comfort of superintendents and principals. It should be kept in mind that promotions from one class to another do not necessitate a change of rooms and teachers:

HAMILTON SCHOOL.

ROOM 1. 65 pupils in 3 divisions.

Grade 1 { C class, just beginning the work at schools.
B class, 12 weeks ahead of the C class, grade 1.
A class, 12 weeks ahead of the B class, grade 1.

ROOM 2. 44 pupils in 2 divisions.

Grade 1, A class, doing the same work as the A class, grade 1 of room 1.

Grade 2, C class, about six weeks ahead of A class, grade 1, just entering grade 2.

ROOM 3. 64 pupils, in 2 divisions.

Grade 2 { B class, 12 weeks ahead of C class, grade 2 of room 2.
A class, 12 weeks ahead of B class, grade 2 of room 2.

ROOM 4. 69 pupils, in 2 divisions.

Grade 2, A class, doing the same work as the A class, grade 2 of room 3.

Grade 3, C class, 12 weeks ahead of A class, grade 2.

ROOM 5. 66 pupils, in 2 divisions.

Grade 3 { B class, 12 weeks ahead of C class, grade 3, of room 4.
A class, 12 weeks ahead of B class, grade 3, of room 4.

ROOM 6. 64 pupils, in 2 divisions.

Grade 3, A class, doing the same work as A class, grade 3, room 5.

Grade 4, C class, 12 weeks ahead of A class, grade 3.

ROOM 7. 60 pupils, in 2 divisions.

Grade 4 { B class, 12 weeks ahead of C class, grade 4, of room 6.
B class, advanced 6 weeks ahead of B class, grade 4.

This class will begin on the work outlined for the last half of the A class, grade 4, next term.

ROOM 8. 45 pupils in two divisions.

Grade 5 { C class, 18 weeks ahead of B class, advanced grade
4, of room 7.
B class, 12 weeks ahead of C class, grade 5.

NOTE.—This is a primary school. Promotions are regularly made every three months. If a pupil falls behind, he easily adjusts himself to the class next back of his. If a pupil is specially promoted, the mental life is not stretched out of him.

Believing that the foregoing extract will set Mr. Shearer right in regard to the working of the Kansas City schools, in the line of "freedom in promotions," allow me to sign myself,

Gertrude T. Johnson,

Central High School, Kansas City, Mo.

The Fears of Children.

(Abstract of a lecture by President G. Stanley Hall, of Clark University.)

It is important that a good list of subjects should be selected for investigation in child study. Many absolutely useless questions have been sent out for research, questions altogether too general, which seem to try to swallow the whole child at one mouthful. You must specialize. You have to confine yourself to certain ages, for the child becomes an entirely different being at different ages.

Some workers in certain branches believe that they have a perfect system, and feel that there is no need of further study. This is the feeling of many kindergartners. They feel that if their work agrees with Froebel it is all right. But we must realize that if Froebel were living now we would not be in the first rank.

As regards the fears of children, it is desirable to make a record of the age at which each of the fears develops and show how it progresses, culminates, and disappears, in relation to age with children of each sex. From these data, we can obtain average results. The symptoms and effects of fears, as well as the causes, must be catalogued.

The more extreme fears are, of course, the result of disease. They are known as "the phobias," and all are as extreme as hydrophobia. Among them are fear of points, glass, hair or fur, open or closed spaces, fire, dirt, poisons, etc. For such fears, people have to be treated at hospitals.

All children pass through a perfect cataclysm of fears, from most of which they emerge, unharmed, however, so that it seems as though this were a part of nature's discipline.

One of the most common fears observed among children are those of hair or fur, probably, a survival of an ancestral fear; fear of storms, dark dresses, a nameless presence, animals, big men, or policemen, fear of a

general conflagration, fear of slipping, that they are being transformed into some one else or some animal, the bedroom fears, the fear of swallowing the tongue, the fear of the other sex, fear of one's bones breaking, fear of one's own toes, of the moon, of falling through the cracks in the floor, of eyes, of the ground engulfing one, of eternity, and so on.

Girls are far more subject to fear than boys; especially indefinite fears, fears of fears. The physical symptoms of some of these fears are so marked it must be realized that they have left their mark upon the child forever. They, to a great extent, lessen the joy of living to children who are subject to them.

The primal cause of all these fears is overwork; they are overstrained, are put into such a nervous condition as to be easily shocked and startled.

We speak of happy, careless childhood; but after reaching these returns we must realize that the phrase is not altogether truthful.

Of course a great many of these fears are needless, but a great many are evidently inherited. So in these fears we have to deal with revelations which inheritance has brought down to us from a remote antiquity.

The tendency of every fear is to restrain action, and it might be imagined that a set of fears existing in one child would cause the child to be absolutely motionless. These fears prey upon our spinal chords. One may die from fear, as has occurred in the operating-room.

One of the first forms of fear is modified secretions. Fear has been inoculated into animals by the transfusion of the blood of a frightened animal into an animal not frightened, with the result of causing the fear in that animal experienced by the first.

The moral of all this is, if you have any fears, expel them. Physicians ask their patients who come to them for treatment if they have any overwhelming fears. These fears wreck one's system. For this reason the fears should not be played upon. There is a great deal of pernicious folk-lore responsible for them, and I feel that such stories at Poe's and Hoffman's are culpable for this reason.



Columbian School, Hornellsville, N. Y. W. R. Prentice, Supt.

The School Journal.

NEW YORK & CHICAGO.

WEEK ENDING OCTOBER 2, 1897.

School children, especially the girls, are apt to form cliques. As a result a child that is disagreeable to the rest by reason of some slight deformity, an unpleasant manner, or some peculiarity of dress, is let severely alone. Of course the teacher cannot prevent this entirely, but he can help. In the first place he himself must show absolutely no partiality. Never mind if it is a temptation to make a pet of the daintily dressed, well-mannered child and to push off with a curt word the one that is less favored. The temptation must be resisted. In the second place there can be little talks to the effect that the school is a place where all are friends and each is interested in the welfare and happiness of every other. Then suppose the teacher devote an occasional recess or a half hour before school to bringing together the children of the various "sets." A little work for all to do, perhaps a game or a chat on some subject of common interest will be an aid to the desired result. If the teacher is constantly on the lookout he can exert a quiet influence that will mean everything to the unfortunate child who is not welcomed in any set.

Strange that most croakers and opponents of progress in general should love to think themselves emulating the example of Cato when they have been hoisted into some position of power. They seem to forget that the latter gentleman placed himself in opposition to advancing culture only long enough to become convinced of the folly of trying to stop it: he learned Greek in his old age. The old woman in the fable kept on sweeping to hold back the ocean. There is just this difference between Cato and the followers of the old woman; the latter take advantage of the privilege granted them by the Sage who remarked that "the right to be a cussed fool is free from all devices human," while Cato didn't.

It is a well known fact that the petty tyrants of schooldom are not to be found so often among superintendents as among the trustees and principals of schools. The securing of absolute submission of all who happen to come under their supervision seems to be the ambition of many of these "bosses." This is never a desirable thing but it is particularly to be deplored when the "boss" happens to be a principal or trustee of the ultra-conservative persuasion, determined to squelch attempts of any progressive teachers.

Owing to the pressure on our columns this week the list of text-books published during September and the department of school law must be omitted. The former will appear in the next issue, but it is doubtful if space can be found for the latter before the first paper in November

Report of Committee on Agriculture.

Washington, D. C.—The second report of the committee on methods of teaching agriculture has been sent out from the office of experiment stations of the United States department of agriculture. Suggestions are made for a four-years' course in agriculture, the total number of hours to be spent in direct work, including the time spent in the laboratory, to be 3,600. The following are the general studies, with the number of hours to be devoted to each: Algebra, 75; geometry, 40; trigonometry, 40; physics (class-room work), 75; physics (laboratory work), 75; chemistry (class-room work), 75; chemistry (laboratory work), 75; English, 200; modern languages, 340; psychology, 60; ethics or logic, 40; political economy, 60; general history, 80; constitutional law, 50—a total of 1,285 hours.

The additional subjects suggested for the more direct study of agriculture are, with the hours to be devoted to each, the following: Agriculture, 486; horticulture and forestry, 180; veterinary science, including anatomy, 180; agricultural chemistry, in addition to general requirement, 180; botany (including vegetable physiology and pathology), 180; zoölogy (including entomology), 120; physiology 180; geology, 120; meteorology, 60; drawing, 60—a total of 1,746 hours.

The special work in agriculture should include the study of agronomy, or plant production, embracing consideration of climate, soils, tillage, irrigation, fertilizers, drainage, plant production, and farm crops; zoötechny, or animal industry, embracing principles of breeding, breeds of live stock, the feeding, care and management of stock; agrotechny, or agricultural technology, embracing butter-making and cheese-making; rural engineering, embracing roads, drains, irrigation systems, farm buildings, and machinery; rural economics, embracing history of agriculture, farm management, rural law, and farm accounts.

The following serves to show in a general way the equipment required in connection with the instruction given in a four-years' course: For Agronomy: Field trials of various crops for class demonstration; laboratory for work in soil physics, pot experiments, etc., this laboratory to have a floor space of from 1,000 to 2,000 square feet; collection of soils, fertilizers, plants, etc., for class illustration; photographs, lantern slides, charts, diagrams. Books of reference: For zoötechny: Live stock of different types and breeds; lecture-room, arranged for exhibiting live animals to class, and equipped with instruments of precision for weighing and measuring; collections of models, mounted specimens of animals, specimens of foods, etc.; lantern slides, photographs, charts, etc.; reference books, especially herdbooks and stock registers. For agrotechny: Dairy laboratory, which should include butter-making, cheese-making, cheese-curing, pasteurizing, receiving, store, refrigerating, boiler and engine rooms. These should be equipped with all modern apparatus for testing and pasteurizing milk, and making butter and cheese. For rural engineering: College farm should illustrate various problems in farm engineering, such as roads, drainage, and irrigation; laboratory, equipped with apparatus for illustrating various mechanical problems in farm machinery; collections of tools and farm machinery; lantern slides, charts, and diagrams; reference books. For rural economics: Reference books.

Editorial Letter.

English Traits.

The cause of the evident differences between the Americans and the English would be a good subject to investigate. Both came from the same stock, yet exhibit marked differences. The English are everywhere noted for continuing to think and do as their ancestors did; we term this conservatism, and rather despise it; but it has its value.

One is struck at once with the intemperance that prevails everywhere; much of this arises from continuing the customs of their forefathers. Burns merely represented the feeling of his generation when he praised whiskey. Dickens, while given to caricature, has not overdrawn the custom of drinking, in Pickwick. In one town in England, so certain are they of the value of beer that a spoonful is the first liquid given the new-born babe. There is such a confidence in this liquid that one is almost led to believe it was commanded to be drunk in the great Magna Charta.

Men who earn twenty-four cents per day may be looked on as certain to spend eight, or even twelve, in beer. One Englishman said, in explanation of the drinking that was going on, "Ale is both bread and meat for me." There is a confidence here in its virtue that is wholly unexplainable. There is a belief that it promotes health, enables one to bear fatigue, and prolongs life. An advertisement appears in a paper for a matron in an asylum; the wages are named, and the amount allowed for beer. In the pauper houses, beer is provided for the elderly. Servants are provided with beer; women go out marketing, and, feeling tired, stop in a saloon and refresh on beer. The sight of women in saloons is a very common one.

The curate and the vicar also drink beer; it is on their tables daily. This prevents any reproach from the pulpit. Until the preacher abstains, very little progress will be made; the only hope lies in the public school, which, following the example of America, is exhibiting the evils of alcohol. Probably no country in the world would be so comfortable as England, if it were not for the prodigious expenditure for beer. The working man spends from one-third to one-half his earnings on this liquid.

The struggle for the management of the schools is still going on between the clergy and the laity; or rather between the common people and the established church. Originally the parishes carried on schools where the children of the common people were taught to read; especially to say the Lord's prayer and the creed. Then there was an awakening, caused by the knowledge of what Pestalozzi had done at Yverdun, brought here by the Rev. Charles Mayo.

The missionary spirit exhibited by Pestalozzi was imbibed by many philanthropic men and women, and during the last sixty years a serious effort has been made to atone for previous neglect. The original plan was to support these schools by subscription, and this plan was maintained until a few years since the government granted money, in small amounts (compared with the great needs); the amount per capita was not over \$4.25 per annum. There not being enough of the "voluntary" schools—meaning by this, those carried on by the churches—the government authorized schools to be opened. These are termed "board" schools, because managed by a board chosen by the people. In Liverpool, 66,000 children are in the former kind; 33,000 in the latter. The managers of the former see the latter kind increasing every year; they do not want to lose control of the children, for in the "board" schools the creed is not taught. In other words, the state church wants to have its religion taught in the schools; it is only a question of time when all the schools will be "board" schools, for subscriptions are annually less and less. This year the government gave about \$1.25 more to the "voluntary" schools per capita than it had previously. The teachers of these schools suffer from the diminution of subscriptions. One teacher in Liverpool told me he had once been paid \$1,000 per annum; his salary has been reduced to half of that sum.

There is a wonderful belief in the efficacy of a study of the ancient languages; if a member of parliament can, he puts in his speech some sentence culled from them. And yet the Oxford graduate has a hard time if he does not possess the

influence of some of the aristocracy, or if he has no wealth behind him. There are instances of Oxford and Cambridge men who are glad to drive cabs for a living.

Speaking of Oxford, reminds me: While in Oxford, I met a student of Christ Church college, and inquired if the students were addressed by their titles in the class by the instructor. "By all means!" he replied. "It is not uncommon to hear the professor say, after a student has replied or recited, 'Quite right, my lord.' And some are noticeably obsequious to those with titles. I believe I said in my letter from Oxford that a gentlemanly person invited me to enter the hall where degrees are conferred, and sat me in the chancellor's chair, and then demanded three pence; possibly, it was worth it. He was quite bubbling over with humorous anecdotes. Among them, I remember this: Tennyson was to receive his degree; he came in with his hair more than usually disheveled, and the students, always too ready with facetious remarks, and with quotations from the writings of the candidate for honors, if he has written a book, now called, with mock tenderness, 'Did your mother call you early, dear?' Tennyson smiled grimly, but was evidently much embarrassed.

I had heard of Scotch thrift, and had an example of it on the occasion of my visit to Edinburgh. Going to a hotel, I was told the price of a room was \$1.25; that breakfast and dinner were each 88 cents. It was in vain that I told the clerk I must leave for Glasgow after breakfast; I must take two meals or I could not have a room. The reason given was that it was the tourist season, and the opportunity having come to make some money, they were determined to avail themselves of it; later in the season they would give me a room at my own price, and say nothing about breakfast.

The continued use of the compartment carriages on railroads is another evidence of adherence to custom against comfort. You sit in a little room with one, two, three, or four people opposite, and looking at you all the time. The only ventilation is by letting down a window, and to this, those who sit by the window, object. These are copied from the old coaches in use on the roads; having been once used, they will use no other.

The English have a strong notion for keeping up a privacy; especially when they eat. At a little hotel in Rye there were five dining-rooms; the guests eat separately; when there were more guests than tables, some would have to wait; though the tables were large enough to have accommodated two or more parties at a time. This idea of privacy at eating was once so great that the dining-room at hotels was divided, like the square pews in old-time churches in America. Some of these still exist in English cities, and give one a queer feeling of antiquity. It is a copying of the exclusiveness of the aristocracy. These latter, wanting to be put by themselves, were copied by those who had the money to follow the custom.

It is said by travelers, that prices at hotels in England and on the continent have risen quite perceptibly, and the cause is asserted to be the careless freedom of Americans in spending money. An English gentleman will recompense a servant with a penny or two; a silver three pence being considered a large fee; the American, however, tosses out a shilling. It is strange, but true, that the English servant respects his own countryman more who pays him but a three pence than the American who flings him a shilling. An American in London had been quite lavish with his money; not receiving a remittance, as he expected, he asked for time on his bill for board, but was met with a prompt refusal: "You fellows who are so lavish with your money, get no favors from me."

Possibly in England the first unpleasantness will be the "plain breakfast" he attempts to eat. They put before you bread, already buttered, orange marmalade, and coffee. The charge for this, in most cases, is 38 cents, and one reflects ruefully what nice things he could buy at home for this. The same bill of fare follows you all over the continent, honey taking the place of the marmalade. Strange to say, one thrives on this fare, and the conclusion is, that Americans eat too much at their breakfasts. After spending now nearly five months in Italy, Switzerland, France, and England, I must give the Swiss the first rank for understanding how to keep hotels and pensions.

In beginning these letters, I took pains to say they were to express merely the hasty ideas suggested on a journey undertaken with no effort to make a close inspection of history, manners, and customs. The day having arrived when I must leave a country possessing so many attractions and associations, for my own, I drop my pen, hoping the many ties that have connected me with the readers of *The Journal* for many years have been kept from parting by these unstudied jottings, telling them where I am and what I see.

A. M. K.

Liverpool.

The Educational World.

University Extension in Vienna.

The report of the work of the University of Vienna upon the extension work, carried on under its auspices for 1896-7, shows this work to be very satisfactory. The attendance has increased from 6,172 for the first year to 7,465 last year. The subjects of study have been enlarged, while the territory within which the work is carried on has been extended.

The work is in charge of a committee of professors, docents, and assistants, chosen by the academic senate, Prof Dr. Anton Menger being chairman. The lectures are delivered in three series; the first in November and December, the second in January and February, and the last in February and March. Fifty-eight courses were given the first year, 1895-6, and sixty last year. The instruction the first year amounted to 529 hours; the second year to 620 hours.

Of the sixty courses for the past year, twenty-eight were so related that one could be considered a continuation of the other. To natural history subjects, fifteen courses were devoted each year; to medical subjects, seventeen the first year, thirteen the second; to literary subjects, eight the first year, twelve the second; to legal subjects, five the first year and eight the second. The lectures were given by the faculties of the University of Vienna. The circular to the lecturers emphasized the necessity for clearness in the lecture, for extempore delivery, for a satisfactory syllabus, and for a carefully conducted class exercise.

The price of the tickets was a dollar twenty-five cents a course, with special tickets for workmen at a cheaper rate. From the number of these tickets sold, it is estimated that a third of those in attendance belonged to the working class.

Academic Freedom.

Ithaca, N. Y.—In his annual address to the students Sept. 23, Pres. Schurman, of Cornell, presented his ideas as opposed to the recent action taken at Brown university: "Cornell recognizes that the majority may be wrong, and that the minority may be right. Therefore, absolute freedom is the soul of the institution. A member of the instructing staff must be free to present all phases of questions, to speak on both sides, and a teacher who does otherwise, violates his high mission, and misses the supreme function of his vocation. A teacher is the representative of no one; he ministers in the temple of scholarship, and to hold other views than he states would be sacrilege, or worse than sacrilege. We need more heresies in science. The advance of civilization will mean the stamping out of these heresies, or the establishing of their truth. Freedom, absolute, unrestricted freedom is the soul of the university."

Revision of Course of Study.

Hornellsville, N. Y.—The course of study has been revised to meet the needs of the pupils, so far as possible. Number is entirely omitted in the first year, and in the second it is reduced to the very simplest processes, and to the use of very small numbers, while the time was given to reading, writing, composition, and observation in nature has correspondingly increased.

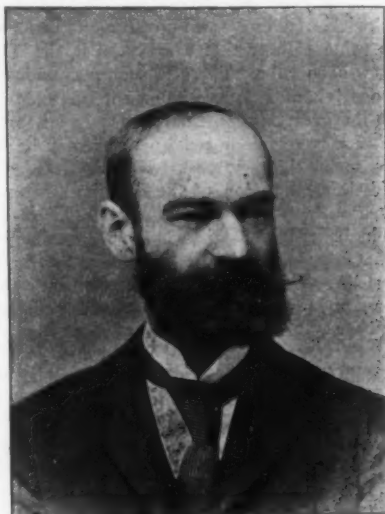
Superintendent Prentice finds that the addition of another year to the requirements for a regents' diploma has caused many pupils to give up the idea of graduation. Supt. Prentice is convinced that eleven years is the maximum point of extension of the course of study. The grammar course was reduced to eight years, and Mr. Prentice suggests that there be a short course in the high school, not to exceed three years. Those who wish to prepare for college may spend a year longer in the high school, or, if necessary, two years.

Schools Not to be Filled With Yellow Fever Germs.

New Orleans, La.—Owing to the fact that the Beaugard school building was situated in the center of a large square, and so was entirely isolated, it was set apart as a hospital for the reception of yellow fever patients. On the evening of Sept. 23, citizens who feared infection, held a mass meeting, to protect against its use for this purpose, and threats were made that the building would be fired. During the evening, Sisters of Charity, together with help from the hospital, had been putting the building in order for the reception of the patients. Finally, Surgeon Bloom, of the hospital, the sisters, and others had been warned that they had best leave the building. They did so, threading their way through a dense crowd of panic-stricken citizens. While the police were busily engaged in attempting to quell the crowd in front of the building, two incendiarys proceeded to the rear and quickly had the building in flames. Several times the hose was cut, but, with the aid of the police, the firemen succeeded in preventing the building from being entirely destroyed.

Philadelphia News Letter.

Philadelphia, which good city thinks that it has made greater advances in school work than other municipality in the United States within the past decade, starts out on its new school year with several plans for bettering its educational facilities. Chief among these is the project to establish a commercial high school for boys. The board of education will ask the city councils for an appropriation of \$30,000 with which to start the school at the beginning of 1898; this money is for the payment of salaries of the faculty, including a principal at \$4,000 a year, and ten professors, at, perhaps, \$2,500 each. The old building, at present occupied by the Central high school, at Broad and Green streets, may be vacated by that school soon after the close of the present year, and it will be available for the commercial school. It is designed that the great commercial languages and the higher features of business life and exchange shall be taught.



Prin. George Howard Cliff, Philadelphia Normal School.

The movement goes hand in hand with the work done in promoting trade among the American republics by the Philadelphia commercial museums, and has back of it such influences as seem to assure its establishment. Theodore C. Search, president of the National Association of Manufacturers, warmly advocates the founding of the school, as does also Dr. William P. Wilson, director of the commercial museums. The only indication of opposition has come from within the board of languages of the associated alumni of the Central high school, which body may inaugurate a movement to have the commercial school made a department of its alma mater, similar to the commercial course of the high school for girls. Prof. George H. Cliff, principal of the normal school, has been frequently mentioned for the principalship of the new commercial school.

Steps are being taken to extend the system of cooking classes, so as to make the study of cookery compulsory with girl pupils of about the sixth school year. There are now eight cooking schools, and a ninth will be established within a few weeks. A new course of study, prepared by Miss Mary Wright, assistant superintendent of schools, will be used.

Music is again being taught, after a rest of many years. Director Pearson and his six assistants have just finished a series of conferences with teachers, the director instructing the teachers in groups of 300 or more, thus reaching the 3,300 teachers within ten days. Each of the six assistants has a certain section of the city, and each began visiting the schools assigned to her this week. Within three weeks the assistants will begin a series of sectional meetings of teachers, who are the actual instructors, and the director will hold conferences from time to time. The course of instruction is divided into two parts; one for the singing and one for the non-singing teacher.

No one event in recent years has created so much discussion among school teachers in this city as the marriage of the former director of kindergartens, Miss Constance Mackenzie, to a colored man. The announcement of her resignation and approaching wedding in July was received with astonishment. John S. Durham, to whom she was married, is of decidedly light complexion. He is a remarkably bright man, a brilliant writer and an excellent lawyer. He was an editorial writer on a leading daily newspaper, and then United States minister to Haiti. Miss Mackenzie had the esteem of Philadelphia teachers, as few have ever had it, and she has done a great work in building up a system of kindergartens. Observers who speak with candor say that there was a revulsion of feeling, and that there were many teachers who openly

avowed that she would be alienated from them. This first wave of feeling subsided, and on Thursday afternoon Mr. and Mrs. Durham stood side by side in the library of the Normal school building, and received the greetings of many teachers.

The reception was tendered as a testimonial and farewell to Mrs. Durham by the Philadelphia branch of the International Kindergarten university, of which she is president. Mr. and Mrs. Durham leave shortly for San Domingo, where Mr. Durham will manage vast sugar interests. The statement has been made that the couple were engaged for nearly ten years, but would not be married until all family prejudice had disappeared.

Miss Anna W. Williams, who succeeds Mrs. Durham as director of kindergartens, is a charming little body. She is best known to the world at large because of the fact that her profile adorns the silver dollar. She taught in the normal school from 1888 to 1897, having previously instructed in a public and in a private kindergarten, and in the House of Refuge. Her term of service as a teacher covers eighteen years. At



the normal school she received a higher salary than the director of kindergartens, but the board of education has added \$550 to the pay of the latter position, making Miss Williams' salary \$1,800 per annum. Miss Williams had a talk with the 180 public kindergartners on Monday last. She will hold monthly conferences with them, and map out a plan of work a month in advance.

The fight against the "pedagogues" is on. The "pedagogues" are the graduates of the six-year-old school of pedagogy, which is connected with the boys' high school. It was discovered in 1891, and the supply of men teachers came chiefly from the country, and in order to bring about a change of affairs, the school of pedagogy was established as a one-year post-graduate course of the high school, and the board of education adopted a rule, which has since resisted all assaults, forcing the sectional school boards to elect graduates of the new school to all eleventh and twelfth grades, corresponding to the seventh and eighth school years, of all boys' schools. The salary was fixed at \$900 a year, with an annual increase of \$30 a year for five years. Women occupying the same position who have had the five years' experience now secure \$820 a year, which includes the additions of the five years.

The first phase of the fight was an unsuccessful and long-continued effort to suspend the rule by a two-thirds vote of the board of education, and elect or promote women teachers who had sufficient experience to prepare boys for the high schools, which are entered from the twelfth grade. The next step was a bitter struggle in the legislature, in which the women demanded a law calling for "equal pay for equal work." The women battled well, but lost. The effort is now being renewed to have the rule suspended, and it came near meeting with success at the last meeting of the board. Samuel B. Huey, chairman of the high school committee, championed the cause of the "pedagogues," and declared that the board would be going back on its promise if it elected any one else but a graduate of the school to the restricted grades. One school has become, in a small way, a normal school for boys, with thirty-three students and a two-year course. A specific case was an attempt to elect Lieutenant Fox, a graduate of the Philadelphia high school, and of West Point, a former city teacher and a retired army officer to the twelfth grade of the Germantown school, but the recommendation of the committee for the suspension of the rule was referred back "for further consideration."

There are more teachers ready to go to work in Philadelphia than can secure places in several years. Of those qualified to teach, 769 have registered as being willing to serve as substitutes. This is an increase of 167 in a year, and 369 in eighteen months. The average requirements of the school system call for about 200 new teachers a year.

Alarm has been expressed at the rapidly-increasing supply, and an attempt is to be made to cut off the growth, first by giving the normal school the authority to dictate to the high school for girls the number of pupils that it will receive; second, by demanding that all candidates for certificates at the

superintendents' examination shall have a high school education, or its equivalent. Rules have been adopted, authorizing these courses, but those whom the normal school declines to receive can take the superintendents' examination. It is generally predicted that the rule permitting the normal school to limit the number of pupils that it will receive will be upset. The normal's new junior class numbers fully 500.

Principals' reports at the end of the month are expected to show a school enrollment of 145,000.

Probably about seventy night schools, including a dozen sewing schools, will be opened early in October.

Superintendent Brooks is preparing to have the schools regraded, the elementary course being arranged by years in eight grades, each teacher keeping her class a year. The first four grades will be known as primary, and the second four as grammar. The first four grades are now half a year each, and are called primary; the second four are of the same length, and called secondary; the third four are one year each, and are called grammar. Nearly three years will pass before the re-form is complete.

School organizations are all making ready for the fall campaign. Teachers' institute classes will resume early in October. Classes in Italian, French, German, the school-room voice, and in painting have been arranged. The Educational Club will meet on the fourth Friday in October. The History Club will have an open session, attended by all principals, on the first Monday in October, at the high school for girls. Miss Lydia A. Kirby will conduct a round table discussion on "Needs of History Teaching in the Lower Schools." The Teachers' Annuity Aid and Pension Fund Association will meet on the second Saturday in October. The Teachers' Photographic Society expects soon to announce plans, including exhibition meetings, and, perhaps, a "field day" or two. The Herbartian Club will soon take up its work.

The sectional school directors, of whom there are twelve in each of the thirty-eight wards, elected by the people, and who form a local governing body in each ward, that often has clashed with the central board of education, which consists of thirty-eight members, who are appointed by the judges of the courts, have completed an organization, which has no authority, but will aid in bringing about uniformity through suggestive work.

On good authority, it is stated that the questions submitted to the candidates for positions in the faculty of the new high school for girls in New York, were prepared, by request, by the teachers of the high school for girls in this city.

The principal new school personages this fall are Prof. Benjamin W. Mitchell, head of the department of ancient and modern languages at the Central high school, a Princeton graduate, who had a private school thirteen years in Pittsburgh; and Dr. Martha Bunting, head of the biological department at the high school for girls, who is a Ph.D., of Bryn Mawr, and comes to this city from the Woman's college, of Baltimore, where she was one of the faculty.

On Monday, Sept. 20, the Central high school celebrated the sixtieth anniversary of the laying of the corner stone of its first school building. The school hopes to enter its new \$1,000,000 home early in 1898. Military training is to be introduced in the school. The regular complete school course now covers a period of fourteen years; eight in the elementary, four in the high, and two in the normal schools. If the two kindergarten years be considered part of the course, the whole system embraces sixteen years.

Albert E. Turner.

For Uniform Examinations in Texas.

In his annual report, State Supt. J. M. Carlisle comments upon the new certificate law. The local permanent certificate provision was repealed by the last legislature, to the satisfaction of school officers and thoughtful teachers who had witnessed the abuses which had grown up under it. While Supt. Carlisle finds the law satisfactory on the whole, he recommends a few desirable changes.

Section 77, permitting the issue of permanent certificates to college graduates should be repealed. The college courses of study are so far from uniform that graduations even from high-class colleges form an unsatisfactory basis of certification. Other sections of the law contain provisions whereby permanent state or county certificates may be obtained upon examination. The examination may be taken in sections—the second grade subjects one year, the first grade a second year, and the additional permanent subjects a third year.

Supt. Carlisle thinks also that the law should provide for appeals from county boards of examiners to the state board by applicants who think their papers have not been correctly graded, and that a county superintendent should have a right to have papers which have been too liberally graded revised by the state board.



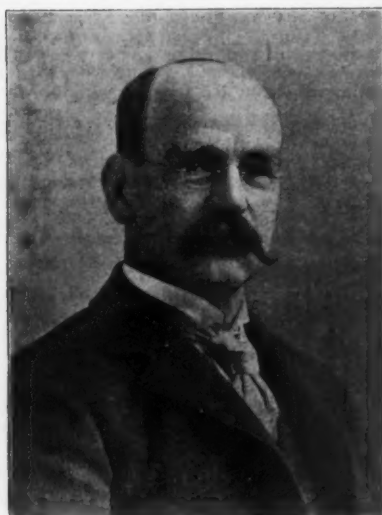
William H. Maxwell, Brooklyn.



E. P. Seaver, Boston.



Thomas M. Balliet, Springfield Mass.



A. B. Blodgett, Syracuse, N. Y.



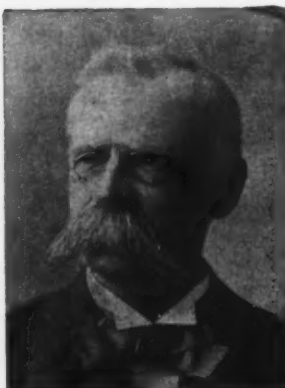
H. S. Tarbell, Providence, R. I.



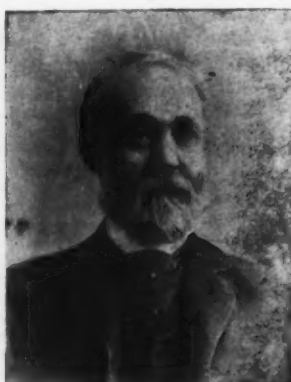
S. T. Dutton, Brookline, Mass.



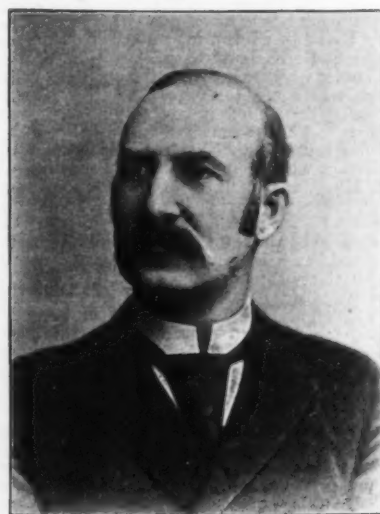
R. H. Halsey, Binghamton, N. Y.



W. B. Powell, Washington.



Edward Brooks, Philadelphia.



Charles M. Jordan, Minneapolis.

Prominent Superintendents of City Schools. I.

Items of Live Interest.

The newspapers have stated that physical culture is no longer taught in the Milwaukee schools. The report is not correct. The special teachers of physical culture have been dismissed, and the instruction is going on as before, under the supervision of the principals.

Buffalo, N. Y.—The attendance of pupils at the public schools has increased from an average of 19,381 ten years ago to 44,344 at the beginning of the present term. There has been an increase of 15,000 in the attendance in the last four or five years. The building of four large, modern schools is necessary, to accommodate the increasing number of pupils. A very large and expensive high school building has recently been completed on the East Side, but the council is looking for a suitable site for another school.

Jersey City, N. J.—Supt. Snyder reported to the board of education that up to Sept. 23 there had been registered in the schools since their opening, Sept. 13, 22,477 children. There were 1,985 pupils attending thirty-four half-day classes, or 751 more than a similar report showed last year. His report further showed that 1,985 have been refused admission, which exceeds the number reported a year ago by 751. Every one of the twenty-two schools in this city, save six, have refused pupils, for lack of room, a majority being in the old Hudson city section. To accommodate this excess, five new school buildings will be erected during the coming year.

Mr. J. R. Fitzer, of Salem, N. J., has been appointed to succeed the late A. B. Guilford as principal of school No. 7.

The annual meeting and dinner of the Principals' Association, of Jersey City, was held at Hotel Washington, Tuesday evening, Sept. 14. Appropriate resolutions, touching the death of the late Prin. Guilford, were adopted, and the old officers were re-elected, as follows: President, George H. Linsley; vice-president, A. D. Joslin; secretary, L. A. Goodenough, and treasurer, F. W. Eveleth.

A boy taken in an epileptic fit nearly caused a panic in school No. 90, Flatbush, last Friday. The class, which numbers forty, were very much affected for a while, thinking their schoolmate was dying. Miss Stamm, the teacher, showed great presence of mind, and soon succeeded in quieting her pupils. The school is provided with many doors, and if a panic had occurred the thousand pupils could have been dismissed in a very few minutes.

Ithaca, N. Y.—On the opening day at Cornell the registration was 1,495, as opposed to 1,454 last year. The total number of students last year was slightly over 1,800. There will be about 1,900 this year.

New Brunswick, N. J.—There are fifty-four applicants for admission to the freshman class of Rutgers college, as was found upon the opening of the college, Sept. 22.

Princeton, N. J.—The university opened Sept. 22 with the largest freshman class since 1892. The changes in the faculty, of which there are several, have not as yet been announced.

San Francisco, Cal.—A society has been organized by the graduates of the Deaf, Dumb, and Blind Asylum, at Berkeley, for the purpose of interesting wealthy people, and, if possible, the federal and state governments, in establishing scholarships for the blind in leading educational institutions. The president of the society is Newell Perry, a graduate, and at present an instructor in mathematics in the University of California. Daniel Wilder, of Oakland, is vice-president, and Dennis Foley is secretary.

Trenton, N. J.—The colored industrial school marked the first year of its existence by a flag raising on Friday last. The flag was presented by Mrs. Clara Young, and received by the principal, J. M. Gregory. A salute was fired by a detachment of cadets from the Bordentown Military institute, and addresses were made by W. H. Carter, vice-president of the board of trustees, Mayor Gilbert, Bishop Grant, and others. The school has its home in "Old Ironsides," formerly the home of Commodore Stewart and Mrs. Delia T. S. Parnell.

Hornellsville, N. Y.—A general teachers' meeting has been held each month. Among the subjects considered at these gatherings are "Relation of Teacher to Parent," "Use of Periodicals," "Individual Teaching and Class Teaching," "Teachers' Voices," "Instruction in Manners," "Ventilation and Exercise," "Truants," "Irregular Attendance," "Primary Reading," and "Vertical Penmanship."

Irvington-on-the-Hudson, N. Y.—The statement has been made here that the Rev. Dr. E. N. Potter has accepted the presidency of the Cosmopolitan Educational University Extension. Dr. Potter was born in Schenectady, in 1836, his father being Bishop Alonzo Potter. He is a brother of Bishop Henry C. Potter, of New York. From 1871-84, Dr. Potter was president of Union college, and later the president of Hobart college, from which position he resigned last spring.

Stockton, Cal.—The letter of Pres. Kitchener, on retiring from the board of education of Stockton, contains some very pertinent suggestions, among which the following are especially worthy of note:

"The stand taken by many boards of education that pupils are entitled to protection from 'dyspeptic' teachers is well worthy of consideration. While we may well sympathize with the mental or physical dyspepsia of the afflicted teacher, practical sympathy for the forty or fifty pupils in her care is even more imperatively demanded."

"While, in my judgment, the high school should be fostered and strengthened so that it will rank with any like institution in the state, something should be done by parents, pupils, teachers, and the board to check the present tendency to emulate the universities by the heavy expense to the parents of graduates involved in providing outfits, and other paraphernalia for class days, class balls, class pins, class athletics, class secret societies, class receptions, etc. While such functions and their accompanying expenses are well enough, in a society way, some of them, to say the least, are not conducive to study, or to the standing of the school as the 'Poor Man's college.'"

Erie, Pa.—This city is the first in Pennsylvania to take advantage of the new state law, providing for a free library system. Benjamin Whitman, a citizen of Erie, was the originator of the law.

Millburn, N. J.—Another example of the tendency to give responsible educational positions to women is seen in the recent unanimous election of Miss A. May Hebard as supervising principal of the schools of Millburn township, Essex county, N. J.

Hartford, Conn.—Of the 1,557 towns in New England, 135 retain the district school system. Of these, 135 are in Connecticut.

Testing Pupils' Eyes.

Hornellsville, N. Y.—A systematic examination of the pupils' eyes was begun in the higher grades, and carried down through the third. As the purpose was not to gather statistics, the results have not been tabulated. Many cases of defective sight were found, though few were serious. The examinations of eyes will probably be continued next year; it will now be easy to tell if the pupils' eyes are injured by study.

Examinations and Promotions.

New Bedford, Mass.—In his annual report, Supt. Hatch pays considerable attention to the subject of promotion. While regular annual promotions are still retained, they are no longer based on formal examinations. It is possible for a pupil who works for it to advance out of his course. Thirty-two pupils have had double promotions in the grammar grades during the last year, and most of them have justified the action by their subsequent standing. However, unless the schools can have regular semi-annual promotions the percentage of double promotions must continue to be small. Pupils would find it easier to obtain special promotions if semi-annual promotions were substituted for the present system. Supt. Hatch thinks that this would be a step in the right direction; but to go beyond this and secure personal and individual instruction would be a much more difficult and expensive matter.

Educational Articles in Reviews and Magazines.

October Atlantic Monthly.

The Training of Teachers: The Old View of Childhood, and the New. By Frederick Burk.

October Review of Reviews.

Women at the English Universities. By Mary Taylor Blauvelt.

October North American Review.

College Discipline. By the president of Stanford university. The Tenure of the Teachers' Office. By E. L. Cowdick.

October Harper's Magazine.

The Century's Progress in Chemistry.

October Scribner's Magazine.

The Life of a College Professor. By Bliss Perry.

September North American Review.

Are Our School Histories Anglophobe? By Prof. Goldwin Smith.

October Popular Science Monthly.

Free-Hand Drawing in Education. By H. G. Fitz. Science at the University of Chicago. By Prof. F. Starr.

New York City's New Schools.

Two new school buildings are to be erected in New York very soon, which will undoubtedly be the finest in the city. The larger of the two, an illustration of which is given here, through the courtesy of the "New York Sun," will be known as school 165, and will be built on a site 300 feet west of Amsterdam avenue, running from 108th to 109th street. The principal front will be on 109th street, and the design is drawn upon what is called the letter H plan. This will provide open play-grounds close to the streets on each side of the block, a large amount of space for windows, ample courts, and solid blank walls along the outer boundary line of the plot next to other building lots.

The main building will form the cross piece of the H, standing along the center of the plot, and will contain the assembly-room, the wings running along each end of this. There will be only two class-rooms on each floor, with windows opening directly into the street, and these will have windows opening upon the courts, so that the noises of the



Public School, No. 165, New York City.

street can be avoided without losing the benefit of the open windows. The framework will be of steel, with floors of steel beams, and brick arches. The outside walls will be of granite, limestone, gray brick, and terra cotta, with the roof of red tiling. The building will be five stories high, and the contract price is \$303,107. Provision will be made in the building for the medical inspection of pupils by the officials employed by the board of health. Upon the first floor there will be a large room for the medical inspector, provided with all needed sanitary and toilet accommodations.

The present contract calls for the erection of the wings on 109th street front only. With these wings alone, the second, third, and fourth floors will each contain fifteen class-rooms, or a total of forty-five rooms. When the wings on 108th street are built they will add twelve class-rooms and two kindergarten rooms.

The fifth floor will contain rooms for manual and physical training and lecture and reading-rooms. On the third, fourth, and fifth floors there are toilet rooms in addition to those on the ground floor, separately arranged for the boys and girls. The wardrobes are all placed outside the class-rooms, where they are easily accessible, and thoroughly ventilated, and each closet has a coil of steam pipe at the bottom, to insure the drying of damp clothing. The heating and ventilating of the new buildings is also to be done upon a system which insures a thorough change of air every few minutes.

The other new building is to be school 166, which will be on the south side of 89th street, between Amsterdam and Columbus avenues. The cost will be \$233,000. The lot has 250 feet frontage, and runs back half the depth of the block. The structure will be five stories high, with a steel frame, and fire-proof, and the outer walls will be of granite, limestone, gray brick, and terra cotta. The roof will be covered with a glazed tiling. The first story will contain boys' and girls' playrooms, a janitor's office, and an office for the medical inspector, with drinking fountains and toilet arrangements. The playrooms will be floored with asphalt, and wainscoted with glazed brick.

The second, third, and fourth floors will contain thirty-five class-rooms and one kindergarten room, and the fifth floor, rooms for manual and physical culture and lecture and reading-rooms. All the upper floors are provided with perfect sanitary arrangements. Entrance to the building will be through gateways at either end, and also through a central doorway, which opens into passages leading to the main stairway and to the boys' and girls' playrooms, which are on the main floor.

These buildings were designed in the office of C. B. J. Snyder, the superintendent of school buildings.

Greater New York Notes.

Saturday Normal School for New York City Teachers.

Messrs. Conroy, Dwyer, and Ettinger, of the New York Teachers' Association, are busy with a plan for a Saturday normal school, which it is expected will be of great service to local teachers, should it become an established fact. These gentlemen, as a sub-committee of a special committee of the association, have talked the matter over with several superintendents and members of the board of education, and all seem to be favorably impressed with the idea. Last Tuesday the committee consulted with Supt. Jasper, who now has, it is understood, the matter under consideration. Should the plan go through, as expected, the board of education and the superintendents will have charge of the proposed normal school as a part of the city's educational system.

The Joke Not on Mr. Edson.

The local school public is having some fun over an alleged failure of the newly-elected assistant superintendent, A. W. Edson, to pass the civil service examination now required of superintendents who take positions in the New York city schools. The joke, however, is in the would-be jokers; for Mr. Edson has only taken a part of the required examination, and will no doubt prove his ability to secure the necessary 85 per cent. in the final result. Mr. Edson is one of the ablest superintendents in the country, and there is no doubt of his scholastic fitness to fill the position to which he was nominated by the New York board of superintendents, and elected by the board of education. The fact is, that in taking the first part of his examination before the civil service board, Mr. Edson found it necessary to leave hurriedly, to catch a train for his Massachusetts home, leaving the examination unfinished. This failure to complete the examination at one sitting led to the report that he had failed to pass. It is said that the examination questions asked Mr. Edson were prepared by Dr. Shaw, dean of the school of pedagogy.

Essex Principals to Meet Oct. 8.

East Orange, N. J.—Regular meetings of the Essex Principals' Association are held at the East Orange high school on the second Friday evening of each month during the school year. The first meeting for this year will be held on October 8. Prin. C. E. Morse, of the Ashland school, East Orange, is chairman of the executive committee.

Westchester Teachers Meet at Dobbs Ferry, Nov. 6.

Westchester County Teachers' Association holds its first meeting of the season Saturday, Nov. 6, beginning at 10 o'clock, in the Union School Building, at Dobbs Ferry. So the association's executive committee decided at a meeting last Saturday, in New York city. The following program of speakers has been arranged for the meeting Nov. 6: Dr. S. J. Preston, of Mamaroneck, on a "State Course of Study"; Dr. Richard Jones, of the state regents, on "Literature in All Grades"; Dr. W. R. Shearer, of Elizabeth, N. J., on "Promotions"; Dr. Arthur G. Clement, of the state regents, on "The Study of Geography." All teachers are invited.

Information Wanted About the New Course of Study.

New York city primary teachers want the lessons in nature study, elementary science, and drawing, required by the new course of study, postponed until more definite information is officially given them respecting the subjects. This was unanimously resolved at the meeting of the Primary Teachers' Association, Sept. 17, at the Normal college. At the same meeting it was resolved that the assistant superintendents and supervisors be requested to give one or more talks to the teachers on the new course, and especially on the requirements for arithmetic and drawing. Assistant Supt. Edward D. Farrell will be asked to talk on arithmetic, and Dr. James D. Haney on drawing, early next month.

Teachers entitled to receive the salary of \$750 for fourteen years' service were requested to send their names at once to the president, Mrs. Mary A. Magovern, that effort may be made to secure the salary for those completing the fourteen years before Jan. 1, when the new salary schedule goes into effect.

The questions of a Saturday normal school and of class meetings for teachers at the Teachers college were also discussed. The meeting was large, enthusiastic, and harmonious.

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Topics of the Times.

Few outside of diplomatic circles realize how different the situation of Germany now is from what it was under the premiership of Bismarck. In addition to his league with Austria and Italy, he had his secret treaty with Russia; he had France and Italy by the ears over Tunis; he had France and England by the ears over Egypt. Now it is Austria that has gone behind the dreibund to make a secret treaty with Russia. Italy is so weakened that she counts for little, and has, besides, her secret treaty with England, making the dreibund appear hollow from that side also. France and Italy are now on fairly good terms; there is a distinct understanding between France and England; and the Russian alliance is now an accomplished fact. The net result of all these changes is to make Germany the isolated power, and to cede to Russia the first place in European diplomacy which had been Germany's from 1870 until William broke with the man who had won it.

The new steamer, the Kaiser Wilhelm der Grosse, arrived at Sandy Hook Sept. 26, after he quickest voyage eastward from Southampton that has ever been made—5 days, 22 hours, and 45 minutes. Her tonnage is 14,000 tons; horse power, 28,000; length, 649 feet; beam, 66 feet; depth, 140 feet. She is the heaviest in tonnage of any of the great ocean liners that are now in use. There is in existence, however, a larger ship, the Oceanic, of the White Star line, now in the Glasgow docks. This ship, it is believed, will force the great German into second place. The Oceanic will be 704 feet in length.

The Spanish cabinet has resigned owing to the implied threat contained in Minister Woodford's "warning," under the belief that a Liberal cabinet will be better able to propitiate America. The queen regent has accepted the resignation of Gen. Azcarraga, but has asked him to continue in office as premier until a solution of the crisis is found. Segasta, the Liberal chief, has been summoned by wire to Madrid, and it is believed he will form a cabinet, and that he will recall Weyler and offer immediate autonomy to Cuba. It is not believed the Cubans will accept it; nothing short of independence will satisfy them.

So great has been the rush to the gold fields, that recently 300 people were reported camped on the beach at St. Michael, Alaska. Many ships were expected to arrive soon bringing others. They want to go up the Yukon river to the gold fields. It is believed, that with the many people going to the region and the limited means for getting food, the suffering this winter will be severe.

A member of the firm of Tiffany & Co., of New York, said recently that they had reduced the price of their current patterns of sterling silver forks and spoons to \$1 per ounce. This is the lowest price of manufactured silver ever known. They do not believe that any political act of our government or of governments abroad can give silver any permanent increase in price. The supply of silver is practically unlimited, and, were silver mining suspended, the supply would still not be entirely cut off, for silver is a by-product of many other minerals.

Judge Acheson, of the United States circuit court, has decided that the alien tax bill, passed by the Pennsylvania legislature is unconstitutional. He declares that it is in conflict with the equality clause of the fourteenth amendment. The alien tax bill provided that a tax of three cents a day should be levied against the wages of every foreign born, unnaturalized male person over twenty-one years of age employed in Pennsylvania. Judge Acheson says that this tax is an arbitrary deduction from the daily wages of a particular class of persons, and is thus an invasion of their right to the equal protection of the law.

Much discussion of boundary claims between Canada and the United States in the Alaskan region has arisen along with the stories of gold finds in the basin of the Yukon. General Duffield, superintendent of the United States Coast and Geodetic Survey, states that if there is to be any dispute over the boundary line it will be in regard to the ten-league coast line in the southeastern portion of Alaska, as that is a question which admits of considerable diversity of opinion. He said further that he did not believe that when the matter of the boundary line between the two countries is definitely settled there will be much change from what is down on the map at present. There certainly will not be, as far as regards the Klondike region, which is, beyond dispute, in the British Northwest territory. Dawson City is one hundred miles or more east of the 141st meridian, which is the boundary line.

American capitalists have obtained the privilege of collecting, taking charge of, and disbursing the customs duties of Honduras, of acting as the special and financial agent of the government in the settlement of its present indebtedness; of building an inter-oceanic railroad from Puerto Cortez, on the Atlantic coast, to some point on the bay of Fonseca, on the Pacific ocean, and of establishing a coast line of steamships from Belisle, on the Atlantic coast of Honduras, to Belize, in British Honduras. The

syndicate is also given permission to establish a bank with special powers; a grant of more than 500,000 acres of land, and valuable colonization and mining privileges are also conceded.

The proposed annexation of Hawaii is being discussed in the islands, and the advantages and disadvantages of such a step set forth. It may be said in the beginning that the feeling against Japan's pretensions to the possession of the islands tends to lessen the anti-annexation sentiment. Those who oppose the annexation of the islands to the United States hold that the natives will have no voice in the government; that the prosperity of the islands will be doomed, because they will not be able to employ contract labor; that if the islands are governed as a territory the government will be likely to be corrupt. The annexationists assert that under a stable government Hawaii will be more prosperous; that the United States would participate in the prosperity of the islands, and would obtain a valuable naval station; that the "manifest destiny" of the Hawaiian islands leads them into the great republic of North America. It is said that the people are prosperous and contented, and that if the present government of Hawaii hadn't a soldier or a gun a revolution could not be started.

A three days' celebration of the completion of the new steel arch bridge was held at Niagara Falls. On Sept. 23, Mayor Hastings, of Niagara Falls, N. Y., and Mayor Cole, of Niagara Falls, Ont., met in the center of the bridge and exchanged greetings, while bands played "God Save the Queen." This was followed by a salute of twenty-one guns. There was a grand illumination and fireworks at night.

A short time ago Rosina Cattaneo, a New York city girl, was reported dying of consumption; to-day she is a well girl. Her rapid recovery is said to be due to the hypodermic injection of the serum of Prof. Maragliano, of Genoa, Italy. The case is attracting wide interest, as the virtue of his serum has hitherto been somewhat discredited in European and American hospitals. The serum is obtained from the blood of horses which have been inoculated with the tuberculosis germ in small quantities.

Theodore Roosevelt, assistant secretary of the navy, has approved of the plan to establish three stations along the Yukon river, one at St. Michaels, another about midway of the length, and a third at headwaters. The stations will be garrisoned by twenty marines each, the forces to be under marine officers and accompanied by naval surgeons.

Nicaragua merchants have petitioned the government to place the country on a gold basis.

Richard Holt Hutton, the famous literary critic and editor of "The London Spectator," since 1861, is dead.

Sir Wilfrid Laurier, premier of Canada, received a public welcome in Ottawa Sept. 1, on his return from attending the Queen Victoria's jubilee in London.

The Hawaiian senate has been called to meet in special session to consider the annexation treaty in advance of action on it by the United States Congress.

The financial situation at Johannesburg, Transvaal Republic, is critical, and the local authorities are urging the government to adopt prompt measures of relief.

The czar of Russia has decided on the partial abolition of the exile of criminals to Siberia, and the substitution therefor of confinement in large central prisons in Russia.

The visit of King Charles, of Roumania, to Emperor Francis Joseph at Budapest was arranged as a public demonstration of Roumania's adhesion to the triple alliance.

The 26th anniversary of the settlement of Concord, Mass. was celebrated at that place Sept. 12.

A colored woman was admitted to the bar recently at Memphis, Tenn. She is the first colored woman lawyer in the United States.

The American Bar Association, at its recent session in Cleveland, O., adopted a resolution in favor of international arbitration.

W. W. Rockhill, of the District of Columbia, has been appointed minister to Greece and Ethan A. Hitchcock, of Missouri, minister to Russia.

The old frigate Constitution, at Newport, was decorated and illuminated recently in honor of the one-hundredth anniversary of her launching.

The United States officers will make an effort to prevent the landing of Louise Michel and her fellow anarchists, English and French, in this country.

The Pennsylvania Railroad Company is propagating 150,000 ivy and Virginia creeper vines to be used in adorning the rocky and other cuts along the line of the road.

For the first time in seven years, it is said the demand for labor is greater than the supply in many parts of Alabama, and there is not a strike or labor dispute of any kind in the state.

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F. W., Edgar & Sons, New York
E. H. B. & Co., E. H. Butler & Co., Philadelphia
W. H. C., W. H. Clive, New York
B. & Bro., Eldridge & Bro., Philadelphia
Plannagan, A. Plannagan, Chicago
F. & W. Co., Funk & Wagnall Co., New York
V. J. L., Frank V. Irish, Columbus, Ohio
Ginn, Ginn & Company, Boston, N. Y., & Chicago
H. M. & Co., Houghton, Mifflin & Co., Boston, New
York & Chicago
H. & N. Hinds & Noble, New York
Harper, Harper & Bros., New York
H. H. & Co., Henry Holt & Co., New York
W. H. J., W. H. Jenkins, New York
L. & S., Leach, Sewell & Sanborn, Boston and
New York
L. & S., Lee & Shepard School Book Co., Boston
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D. McK., David McKay, Philadelphia
L. G. & Co., Longmans, Green & Co., New York and
London
Lovell, A. Lovell & Co., New York
Macmillan, Macmillan Co., New York and Chicago
R. L. M., R. L. Myers & Co., Harrisburg, Pa.
Morse Co., The Morse Co., New York
M. & H. Co., Milton, Bradley & Co., Springfield, Mass.
M. M. & Co., Maynard, Merrill & Co., New York
Pitman, Isaac Pitman & Sons, New York
P. & P., Potter & Putnam, New York
P. T. B. Co., Practical Text-Book Co., Cleveland, O.
Prang, Prang Educational Co., Boston, New York
and Chicago
C. S. Co., Christopher Sower Co., Philadelphia
S. F. & Co., Scott, Foresman & Co., Chicago
Scribner, Chas. Scribner's Sons, New York
Sheldon, Sheldon & Co., New York
S. H. & Co., Silver, Burdett & Co., Boston, New York
Chicago, and Philadelphia
S. W. & Co., Scranton, Wetmore & Co., Rochester
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T. H. & Co., Thompson, Brown & Co., Boston
U. P. Co., University Publishing Co., New York,
Boston, and New Orleans
Werner, Werner School Book Co., Chicago, New
York, and Boston
W. P. House, Western Publishing House, Chicago
W. & R., Williams & Rogers, Rochester, N. Y.
Wiley, Jno. Wiley & Sons, New York

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Sensenig's (4).		Blanks.		Powers' First Lessons.	O. M. P.	Antier's Greek.		Nichol's Trig. (4).		Eclectic (2).		Eclectic (2).	
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Interesting Notes.

A "Ball-Bearing" Building.

The recent seismic disturbances throughout a great portion of the country make particularly interesting the account of an invention by Professor John Milne, head of the Imperial College of Engineers at Tokio, of a building that cannot be damaged by earthquakes. It is novel, simple, and absolutely safe. The whole secret is in the foundations, which rest upon huge steel balls or spheres. When an earthquake occurs the whole building rolls with the motion of the earth. It is really a ball-bearing building. From frequency of earthquake shocks, the locality is well adapted to demonstrate the feasibility of the invention, which on several occasions has proved all the professor claimed for it.

A Stove With Variations.

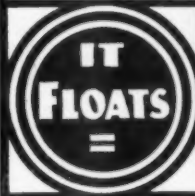
The New York "Home Journal" tells of a new invention for keeping cool in the summer, analogous to the stove which heats our rooms in the winter. "It will reduce temperature, just as stoves heated by fire raise the temperature in winter. By the use of salt, a small quantity of ice, and a patented chemical the most intense degree of cold is secured. So great is the cold that it is as dangerous to touch this cold stove when in operation as it would be to place the hand on a fire stove at a high degree of heat. The skin is instantly taken off, and painful injuries are the result of the slightest contact. During the hottest weather the temperature of a room may be run down and made pleasant. The cost of operating the stove is very slight."

A Remarkable Weapon.

"The English government is now experimenting with a gun, which will fire 1,000 shots in 123 seconds," says the "New York Herald." "It is the deadliest of all the automatic man-slayers ever yet invented. As with all machine guns, the first shot must be fired by hand. After that the weapon absorbs a row of cartridges and emits a chain of bullets as long as it is fed. Experiments made thus far show that on the occasion of a brief, sharp attack the gun can actually be made to fire eleven shots a second."

A very interesting feature of this new gun is that the explosive used is cordite. The whole of this substance is expended in pressure, whereas black powder is only

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useful for pressure to the extent of fifty per cent. The experiments with the gun referred to show that cordite is not affected by water, as is gunpowder, and will stand a great variation in temperature.

The X-Ray in Diagnosis.

At the recent medical congress in Berlin, Professor Benedict, of Vienna, told his confreres that the Roentgen rays are becoming valuable aids to the physician in diagnosing morbid conditions of the heart.

"They have shown that the work performed by a sound heart has been greatly overestimated, and have thus made it easier to understand the vibrations of a diseased heart. It is possible to observe the deterioration of the valves at a much earlier stage than formerly, and to obtain exact information as to the relations between heart and diaphragm. The rays are also very helpful in the early diagnosis of diseases of the lungs, stomach, and kidneys, enabling doctors to get upon their track at a stage which previously escaped detection."

Enormous Power In Sunshine.

A French scientist (M. Monchot) calculates that in an average day the sun will pour on two and one-half acres of ground, heat which might be turned into energy equal to the muscle power of 4,163 horses. He believes that this heat might be utilized and made to do the work now done by steam and electricity. He found that by condensing the heat playing on less than a yard and a half of ground he could boil two pints of water. By arresting sunshine and condensing it, small steam engines have been operated successfully in Paris, but nothing has yet been done to realize practically the great hopes of revolutionizing civilization by using directly the enormous power which comes to us daily from the sun. This power is calculated at that of 217,316,000,000,000 horses.

Arrow Poison from Larvæ.

"The bushmen of the South African district 'Kalahari' use the juice of the leaf-beetle 'Diamphidia' and its larva for poisoning their arrow-heads," according to "Merck's Report." It says: "Lewin found in its body, besides inert fatty acids, a toxalbumin that causes paralysis and finally death. According to Boehm, the poison from the larva also belongs to the toxalbumins, and Starke states that it causes the dissolution of the coloring matter of the blood and produces inflammation. To obtain a solution of the poison, Boehm recommends the maceration of the whole larva with distilled water. After some hours they swell up and the solution becomes light yellow and of an acid reaction. This reaction still remains after shaking out with ether. The aqueous solution then has poisonous properties. The action of the poison is destroyed by boiling."

An Afghan is bound by custom to grant a stranger who crosses his threshold and claims protection any favor he may ask, even at the risk of his own life. Yet, apart from this, he is cruel and revengeful, never forgiving a wrong, and retaliating at the first opportunity.

The finished portion of the new Congressional Library at Washington has about forty-four miles of shelving, which will accommodate over two million volumes. The ultimate capacity of the building for books will be upward of four million five hundred thousand volumes, or nearly one hundred miles of shelving.

There are about 100 grains of iron in the average human body, and yet so important is this exceedingly small quantity that its diminution is attended with very serious results.

Some idea of the slaughter of elephants can be secured from the fact that in Zanzibar alone some 500,000 pounds of ivory are marketed every season from the tusks of 10,000 elephants.

Poe is beginning to come into his full rights as a literary artist. Signs of this are visible in unexpected quarters. A recent "Atlantic Monthly," had an unsigned article (this is very significant) entitled "The New Poe." Of the ornate edition of his works, edited by Stedman and Woodberry, it says, "Poe, of all men, had best reason to pray that he might be delivered from the hands of his friends."

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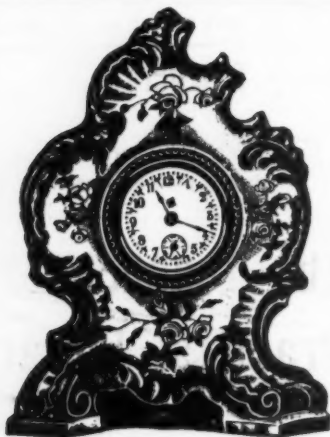
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NEW YORK, N. Y.

The Vatican, according to "The American Art Journal," has called upon the French bishops to supply information as to the different kinds of ecclesiastical music in their dioceses, and the Pope is preparing instructions on the subject, with the intention of inaugurating certain reforms, including the abolition of female voices at liturgical services, while approving of instrumental music. His Holiness thinks it should be limited to the use of the harp and the gentler wind instruments, the violin being discarded as sensual and profane. The music of Haydn and Mozart does not meet with the Pope's approval.

"The Stevenson monument at San Francisco," so "The Westminster Gazette" thinks, "will be in every way a fitting memorial. It was from 'Frisco that Stevenson set out, in his yacht, for the island home where he spent the last years of his happy life. It is fitting, therefore, that the monument should take the shape of a vessel with her bow pointed to the silent lands lying in the Southern seas. The design of the ship is that of a thirty-gunner of the sixteenth century going under a fair wind, with all sail on. At the bow, looking straight away to the sunset, is a figure of Pallas. The vessel will be five feet in height. On one side of the granite plinth on which the vessel rests is the inscription, from Stevenson's 'Christmas Sermon,' 'To be honest, to be kind, to earn a little, to spend a little less, to keep a few friends, and these without capitulation,' and at the base of the plinth a drip-stone for thirsty dogs is a touching reminder of Stevenson's frequent comment, at San Francisco, of the lack of drinking places for wandering dogs."

How Wasps Build Their Nests.

In a tree in the garden round the house where I was stopping was a wasp's nest in process of construction. The busy insects were going backwards and forwards carrying their material to the paper-like fabric; but though I watched several days, I could not discover where it was collected. It happened that the pillars of the veranda of the mud-built house in which I was stopping were roughly hewn trunks of the Lombardy poplar that grows in that region to a good size and considerable height without branches, and makes a clean straight stem. One afternoon, while loitering about the veranda, I noticed that numbers of wasps were alighting on the side of these pillars that was worn by the weather, and then, after a short stay, moved off again, apparently carrying away a small load with them.

Stationing myself close to one of the pillars, I soon had the satisfaction of seeing a wasp alight on it. After running about over the surface to find what he was in search of, he suddenly stopped, and carefully feeling the spot he was on, he cut the worn surface with his nippers, and then proceeded in a workmanlike manner to cut from the surface of the wood a strip the width to which he could extend his nippers laterally, and as he moved backwards he rolled the strip up under his chin with the aid of his forefeet until he had as much as he could conveniently hold, when he gave a finishing cut-off and flew away. Watching the work of construction afterwards, it was marvelous to see how the end of the little roll was attached to the strip of work that was being added to, by means of some waxy gum exuded by the builder, and joined on laterally as it was unrolled until finished, and then the workman would fly away for a fresh piece. Each insect cut off a strip averaging about three-eighths of an inch in length and a little under an eighth in width, and nothing could be more admirable than the artistic and business-like way in which they carried on their work.—"Harper's Round Table."

The Ancient City of Peking.

This city is one of the oldest in the world, but it was not made a capital until Kubial Khan, somewhere about 1282, fixed his court there. Under the Mon-

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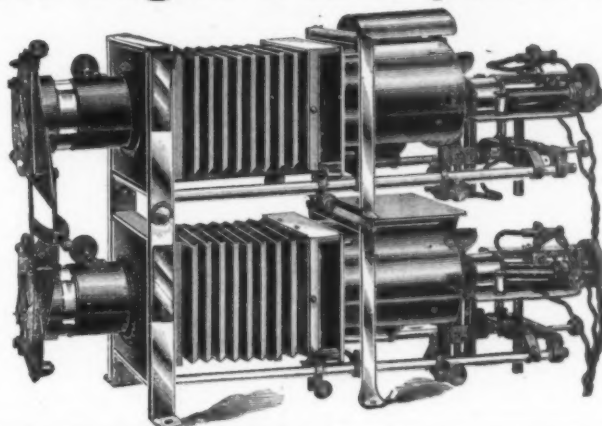
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